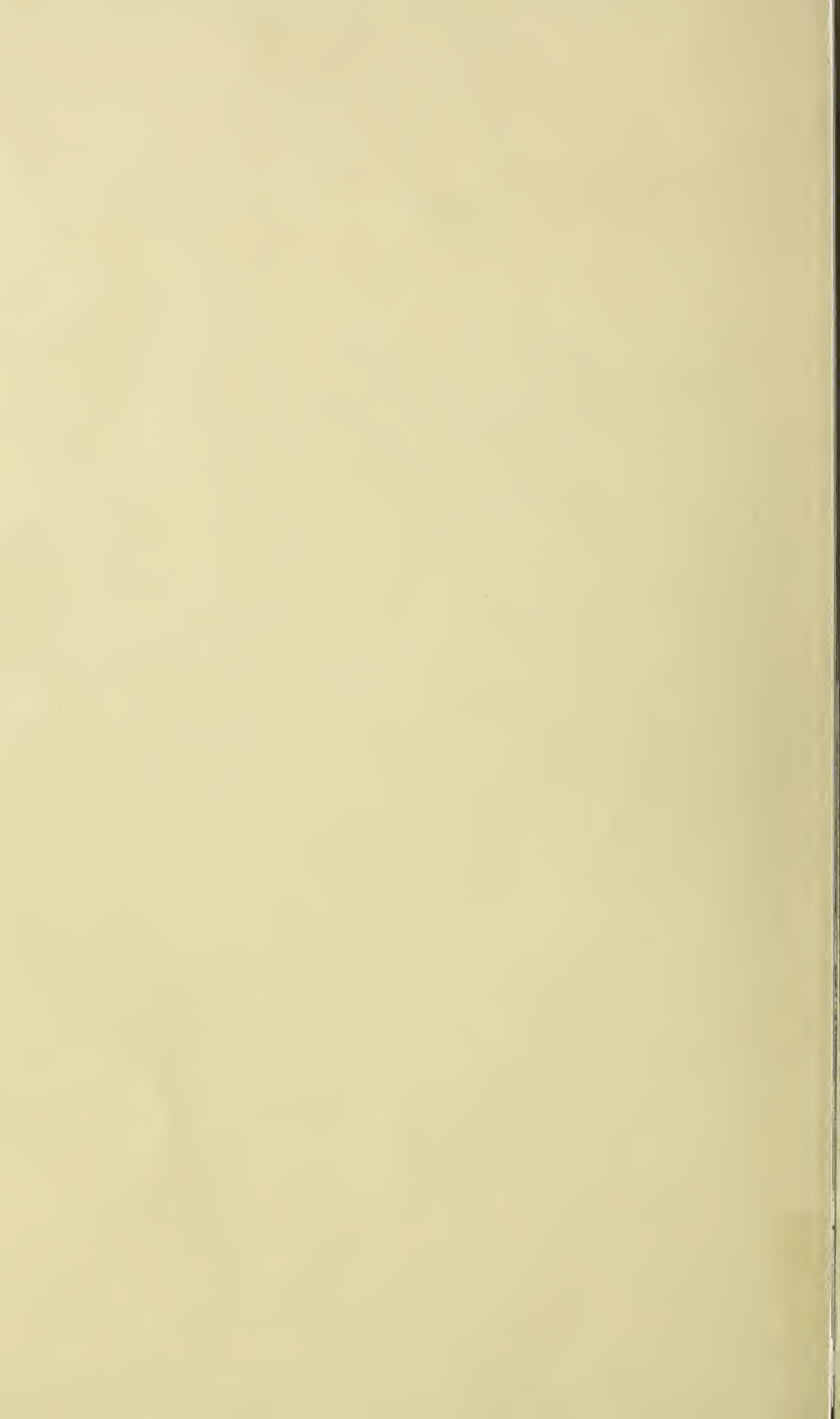


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THE AGRICULTURAL STUDENT

OHIO STATE UNIVERSITY, COLUMBUS, OHIO



NOVEMBER 1916

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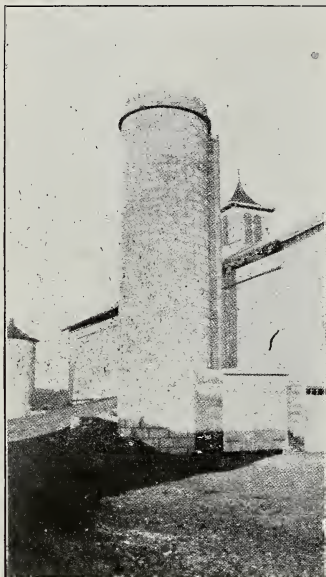
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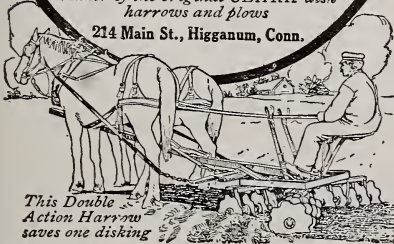
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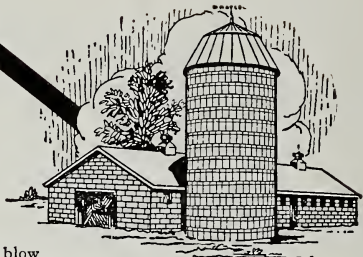
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WITH THE "TENTHS" COUNTED				WITHOUT THE "TENTHS" COUNTED			
	Cream	Test	Fat		Cream	Test	Fat
Sept. 2.....	39.0	36.2	14.11	Sept. 2.....	39	36	14.04
Sept. 7.....	39.5	34.2	13.50	Sept. 7.....	39	34	13.26
Sept. 9.....	38.8	35.8	13.89	Sept. 9.....	38	35	13.30
Sept. 14.....	38.7	32.8	12.69	Sept. 14.....	38	32	12.16
Sept. 19.....	39.5	33.8	13.35	Sept. 19.....	39	33	12.87
Sept. 23.....	39.7	34.2	13.57	Sept. 23.....	39	34	13.26
Sept. 30.....	39.5	31.8	12.56	Sept. 30.....	39	31	12.09
			93.67				90.98

Mr. Field's "Tenths" gained him 2.69 pounds of fat worth \$0.86.

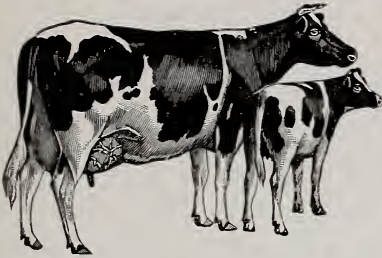
We paid "Freight" back to him on 7 cans of 15c each equal to 1.05 cents.

We sent him a check for \$31.17. \$31.17 divided by 90.98 equals 34.2. At "Elgin" average price his "Tenths" and "Freight" paid him 34.2 minus 32.1 equals 2.1 cents above "Elgin."

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... Contents ...

LIVESTOCK ASSOCIATIONS GIVE MARKET ADVANTAGES—	
A. D. Wilson.....	147
CHANGING PHASES OF SHEEP INDUSTRY—	
Tom C. Stone.....	151
BUILDING UP THE DAIRY HERD—	
George P. Grout	155
DAIRY ACTIVITIES IN FULTON COUNTY.....	158
PROMOTE DAIRY BUSINESS BY PRODUCING CLEAN MILK—	
Dr. J. H. Kellogg.....	161
LIVESTOCK STORIES PICKED UP IN OHIO—	
Clarence M. Baker.....	165
ACTIVITIES OF U. S. BUREAU OF CROP ESTIMATES—	
Leon M. Estabrook	170
EDITORIALS	173
A THANKSGIVING HOME COMING—	
Trell W. Yocum.....	176
HOME ECONOMICS	180
HORTICULTURE	183
CURRENT LITERATURE	185
ALUMNI NOTES	186
NEWS NOTES	189



THE AGRICULTURAL STUDENT

Vol. XXIII. OHIO STATE UNIVERSITY, COLUMBUS, NOVEMBER, 1916 No. 3

LIVESTOCK ASSOCIATIONS GIVE MARKET ADVANTAGES

Results of Minnesota Organization Show That Saving in Shipping May Be Made and Encouragement Is Given to the Production of Better Stock

A. D. WILSON, Director Agricultural Extension, University of Minnesota, St. Paul

LITCHFIELD, Minnesota, is given credit for having the first cooperative live stock shipping association in the United States. The steady and consistent growth of this association has been a guide and encouragement to numerous other shipping associations in the State of which there are now about 300. During the eight years of business the shipping done by the association increased steadily from 14 carloads in 1908 which brought in gross earnings amounting to \$11,599.25 to 172 carloads in 1914 with gross earnings of \$256,044.14.

In 1915 there was a slight falling off in shipments due chiefly to the light hog crop and to the fact that a similar association was organized at Darwin, six miles away. This new association naturally got some of the stock that had previously been shipped from Litchfield.

The efficiency of the organization is shown by the fact that out of the \$256,044.14 received for stock at South St. Paul in 1914, \$244,051.73 was paid to the patrons of the association. The total cost of marketing the stock was \$11,992.41. The items of cost are as follows:

Car mover.....	\$ 4.50
Cheek writer.....	35.00
Pumps, engines, hose, etc.....	93.54
Other expenses.....	435.16
Labor at yard, railroad fare, etc.	455.94

Net received by manager.....	1,739.58
Total local expense.....	\$ 2,763.72
Yardage, freight, commission, etc.	9,228.69
Total cost.....	\$ 11,992.41

The total expense for getting live stock from Litchfield farms to the packers or other buyers at South St. Paul was for cattle, 28.5 cents per hundred pounds, and for hogs, 32.8 cents. Stated another way, if a 1,000-pound beef animal sold for \$60 at South St. Paul, the farmer who shipped it, received \$57.15 after all expenses of the shipment were paid. That is, \$2.85 paid local expenses, freight switching charges, yardage, feed and commission. If a two-hundred-pound hog sold at South St. Paul for 8 cents a pound, or \$16.00, the Litchfield farmer received net \$15.43. That is reducing the middleman's charges.

Margins.

Recently an independent live stock buyer said that he could not do business on less than a \$1.00 margin. The usual margins claimed by buyers is from 50 cents per hundred up. Cooperative associations are able to handle stock on margins from 30 cents up to 60 cents per hundred and pay all legitimate expenses. A margin 20 cents per hundred too high means an added cost of \$40 per 20,000-pound carload.

On a conservative estimate the cooperative live stock shipping association will save at least 20 cents per hundred or \$40 per carload over an efficient independent buyer.

Extra Expense of Local Buyer.

Most independent buyers are honest and reasonably efficient but the system they are following is wasteful and they cannot help it because of competition. An independent buyer has an expense that he cannot get away from of about \$40 per car more than the necessary expense of a cooperative association. He must drive about the country and bargain for stock. This takes time and auto or livery expense. Then on the day of shipment he must pay cash for all stock. If he hasn't the thousand or fifteen hundred dollars necessary, he must borrow it. He doesn't know what the stock will bring the next day on the market. He must guess at that and take his chances. He must guess safe or go out of business. The time and travel necessary to gather up a carload of stock, the advance money, and the risk taken are all items of expense that he must bear. These expenses a shipping association may save.

How the Saving Is Made.

When a live stock shipping association is formed a board of directors is elected and they hire a manager. All members agree to report by phone or in writing to the manager when they have stock to ship. When enough for a car or more has been reported the manager notifies all who want to ship at the time the stock is to be delivered. The stock is weighed, and each member receives a receipt showing the kind, number and weight of animals delivered. Each lot of cattle is marked so each may be weighed and sold separately at the terminal market. Hogs

are not always marked, but we believe it is better to mark them. The association simply ships each man's stock for him and each lot is sold separately and each farmer gets just what his stock brings on the market less the exact cost of getting them there. Each farmer gets the same advantage in selling one or two animals that he would get if he had a carload. The association saves the expense of looking up stock, of advancing money to pay for it, and of gambling on what the price is likely to be. Every farmer gets exactly what his stock brings on the market.

Success Depends on Management.

Like all cooperative enterprises, the live stock shipping association is dependent for its success on its management. The position of manager is not at all difficult. The main requirements are honesty, ability to keep accounts which are not at all complicated, a real belief in cooperation, and a desire to render good service. Such men are plentiful. Often one of the men who has been buying stock independently in the community is the best possible man to get for manager. If he has the confidence of the farmers his experience in shipping stock will be very valuable. If such a man is not available a farmer who has made a success of his business and is in good standing in the community is always a safe man for such a place.

Objections.

Practically the only people who object to cooperative live stock shipping associations, are independent buyers who have been or are afraid they will be put out of business. They often claim that they have inside information or influence on the market that enables them to get better prices than a cooperative association, that there is a big

loss due to shrinkage on each shipment, and that animals are likely to be injured in shipment.

To the first claim that the independent buyer can get more for his stock than a shipping association, it can safely be said that there is nothing in it. When a car of stock is delivered at the stock yards, it is unloaded and turned over to the commission firm to whom it is consigned. The commission firm sees that the stock is fed and watered, then proceeds to sell to the

Shrinkage.

Shrinkage is held up as a large loss by independent buyers. There is a little reason for it because an independent buyer will have a heavier shrinkage than a shipping association, because in an association, the shrink falls on the shipper and all profit from overfilling before loading is done away with and the shipper who unduly fills his stock reaps the loss himself and he soon learns that it does not pay. Stock fed naturally on dry feed before load-



Cattle Ready for Shipment

best possible advantage. The commission firm gets business by satisfying its customers. They are employed to sell stock and if they don't do it to advantage, the shipper will try some other firm. So they have to do the best they can whether they are selling for an association or for an individual. The association is likely to get the better service if any one does, because the ordinary shipping association ships much more stock than the individual shipper, hence the commission firm is more anxious to please it.

ing will shrink very little. They ride to market comfortably and when unloaded they are given fresh water; cattle are given good hay and hogs good corn, all they will eat. If overfed with slop or with salt and water before loading, they often become slightly sick on the train and will not eat or drink well when unloaded, and there will be a heavy shrink.

Loss of Stock.

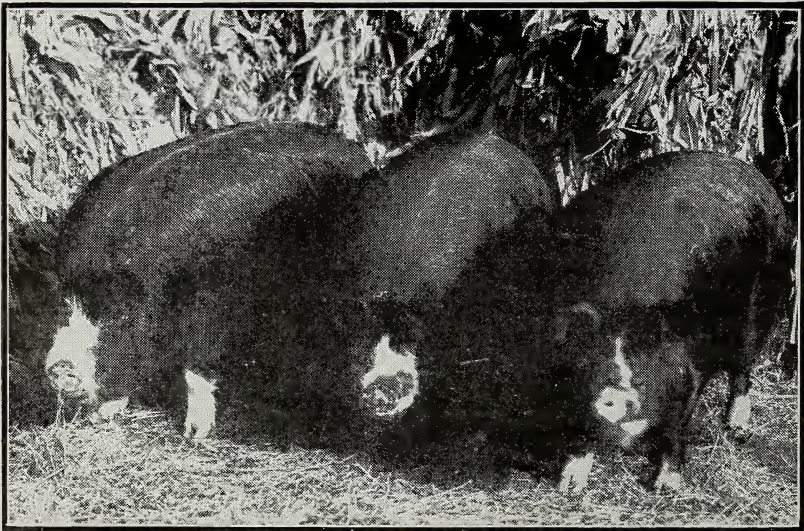
An animal is occasionally injured or killed by being thrown down or tramped upon, or by over-heating. Loss this

way is small. Cooperative associations provide for this by establishing a sinking fund. They set aside not to exceed two cents per hundred pounds on cattle and three cents on sheep, and from this fund pay in full for any losses sustained. The fund is usually much larger in a short time than is needed and may be distributed or the assessment stopped for a time.

There are several advantages of a livestock shipping association. It saves money to its members. The expense of a buyer driving about to pick up stock and of the buyer gambling on the price of stock and advancing money to pay for it is saved. These two items normally result in a saving of from \$40 to \$100 per carload. One man can handle all of the stock shipped out of any town in Minnesota. If there are two or more buyers in your town

you are over-supplied. The association insures each farmer that he will get just exactly what his stock will bring in the central market, less the exact cost of getting them there. In other words, it assures the small shipper exactly the same opportunities that a larger shipper has.

It encourages the production of good stock because each shipper gets exactly what his stock will sell for on the market. If he has good stock, he gets a good price. If poor stock, he gets a poor price, which is not always the case under the independent buyer plan. It discourages the practice of trying to get the stock full of water before they are weighed and shipped, because each lot is sold and weighed separately at the terminal market and the shrink comes right back on the man who stuffed his stock.



CHANGING PHASES OF THE SHEEP INDUSTRY

Factors That Must Be Considered in Establishing the Flock in Ohio

TOM C. STONE, Department of Animal Husbandry, Ohio State University

NO enterprise or business offers greater advantages to the young man of today than the breeding of livestock. The stability of the meat, the certainty of the market, and future prospects all favor increased production of meat animals.

While the United States has been, thru her progressive methods, the leader in many respects, it must be admitted that we have not made the rapid strides in livestock improvement that some European nations have made. We have been content with going to England, Scotland and elsewhere for our sheep, and to France, Belgium, Scotland and England for our horses and cattle when we should have been endeavoring to produce the best in this country. Men have gone to these countries to buy because there is a crying demand for that which the country does not have, and one that must be satisfied regardless of cost. While we do this, these countries sit up and silently chuckle at us because we are putting the money into their pockets instead of our own.

Notwithstanding the fact that we have in the past depended quite largely upon England for our own show sheep, we are gradually getting away from this. One realizes the truth of this statement when he thinks of the large sheep shows that have been held this season in spite of the fact that importations have been largely cut off. In many instances home bred sheep have won over imported stuff. It will possibly be a long while before we cease importing purebred sheep, but meanwhile we should endeavor to raise the standard of our flocks and become less dependent upon England. In these im-

portations we get sheep with the best blood lines, but they are often the discards of different flocks. Folks have been willing to pay much more for an imported sheep than a home-bred one, but they now realize that if the latter are just as highly bred and the individuality is as good as the former, that a difference in price is not justifiable.

Another important change has taken place in the sheep industry. The use of the pure bred sire is becoming more universal. There was a time when the Western sheepmen did not think of paying good prices for pure-breds. This time has passed. Anyone doubting this statement need only read the reports of the Great Salt Lake auction sale and the Anoka Auction sale, Waukesha, Wisconsin, of pure-bred sheep prove this. At the Anoka auction one hundred and thirty sheep were sold. About two-thirds of the offering were rams and lambs, and the remainder ewes and ewe lambs. Twenty Cotswolds averaged \$92, 46 Shropshires \$94, 48 Hampshires \$92 and nine Lincoln rams averaged \$128. Frank Brown of Carleton, Oregon, paid \$250 for a ram lamb. J. R. Allen of Draper, Utah, paid prices ranging from \$90 to \$125 for Cotswolds. There were only a small number of Westerners at the sale but they did their share of the buying.

At the Salt Lake auction sale which was held under the auspices of the National Wool Growers Association, record prices for every breed were made for America. One Hampshire yearling sold for \$675. This ram was sold to James Laidlaw, Muldoon, Idaho. John Seely of Mt. Pleasant, Utah, paid \$1000 for a pure-bred Rambouillet ram, and

Mr. Stanley of North Yakima, Washington, paid \$550 for a Lincoln ram. This was the high water mark for Lincolns in America. Twenty-five yearling rams were sold to Brown Bros., Twin Falls, Idaho, at \$205 each. Ten home bred and imported ewes, 6 and 7 years old, sold for \$38 each to W. H. Billington of Gooding, Idaho.

These rams were not purchased for exhibition purposes but for breeding

how long will these prices continue? There is every reason to be optimistic concerning the future of sheep husbandry. It is quite true that there have been reverses in this business but is there a business of which this is not true. Men who have stayed with their flocks year after year have received a good rate of interest on the money invested and it is only such men that make money in any line of business.



Mutton Type in a Long-Wooled Breed

purposes under range conditions. Many men who withdrew their rams from the ring sold them for more privately than the highest bid their stock had obtained under the hammer. This is good evidence that the sudden rise in sheep values were based on actual demands for good stock.

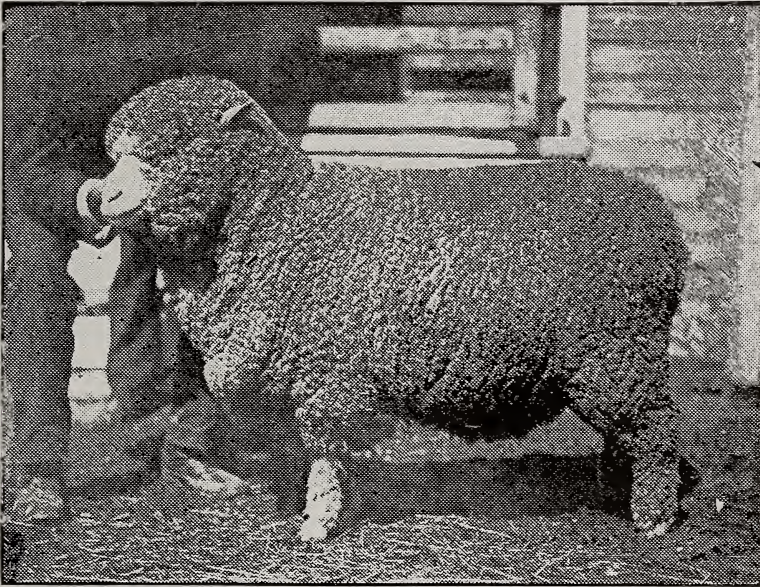
What are the future prospects of the sheep business and the advisability of establishing a flock in Ohio? The pessimist may say prices are high now but

The year 1916 has witnessed the highest live mutton market in trade history, and wool has been constantly advancing. It is hard for the old veterans to grasp the idea that these values are to be permanent. Some believe that overproduction will be the logical sequence of this state of affairs. "Overproduction of wool and mutton," writes Robert Matheson head buyer for Swift and Company in a recent article of the Breeder's Gazette, "is impossible. Un

less domestic flocks are increased it will be necessary to buy in foreign countries, and as the world's supply of both commodities is deficient lower prices are not to be considered." The production of wool and mutton has been steadily losing ground and we would now consume more than we are producing. Last year feed was plentiful and lamb prices were high. Conditions were such as to have caused an over production of lambs but not so. These were purchas-

true the opportunities there are being neglected. In Argentina, the flocks have increased but when the world's shortage of wool and mutton is considered this is a negligible factor.

For many years there was prejudice against the consumption of mutton. A few years ago packers began a campaign to educate the consuming public. At present there is a strong demand for this nutritious meat. Doctors have extolled its virtue, dietitians have also



Good Example of a Medium-Wooled Breed

ed at the highest prices and were in great demand.

True it is that the war has had an effect upon the wool trade, but so far as mutton is concerned it has had no influence. Imports have been materially lessened but this would have happened regardless of the war. A severe drouth has practically eliminated Australia's export trade. In New Zealand the dairy cow is displacing many sheep and the production there is limited. Much is heard about South America's possibilities in the sheep business but if this is

told of its food value and the public is responding in an admirable way. Instead of shipping most of the sheep and lambs slaughtered in Chicago to Eastern markets, a great amount are now being shipped to Western points, and Chicago has become one of the largest mutton consuming points in the country. This explains why Chicago quotations are often higher than Eastern quotations. The factors that bring this about are the improved quality of the mutton, greater care in slaughtering and the more attractive form in which

these carcasses are placed upon the market.

The advisability of establishing a flock of sheep on some of our Ohio farms depends largely upon the man in charge. At a time like this there will be those who will endeavor to get into the business who should stay out of it. They know nothing about the care of sheep and the information or inability to give it may mean failure in the end. Men have sold their sheep because, as they said, "there was no money in them," and the fact was they expected to feed them a ration of weeds and give them no care and still reap great profits. It is true sheep are great weed destroyers and farm builders, but best results are obtained when they receive the same treatment that is given other kinds of stock.

There are many rolling sections in Ohio that are especially adapted to flock husbandry. Sheep also dwell on level land. One can start in the sheep business with little capital and he will have returns in both wool and mutton in a short time. It will be best for the young man to go slow. He can buy only a few at first and it will be only a short time before he will have a flock. It is best for the beginner to gain his experience with grade ewes. He can usually secure grade western ewes upon the large central markets. They are scarce and high in price at the present time. It may be possible for one to secure these in his home community. Beginners should purchase ewes that are two years old or older—yearlings are likely to cause more trouble at lambing time than are older ones. Old breeders would prefer the yearling ewes. If old ewes are purchased one should see that they are sound in udder and mouth for if they are not they are practically useless. The ewes should

be uniform and should be growthy. They should show refinement and femininity altho this should not be at the expense of substance. "A long, low set, short legged type of ewe with two good ends and a good middle," is what Tom Bradbourne the English shepherd says concerning types of ewes which make best mothers.

After the ewes are selected, it is necessary to select a purebred ram of excellent individuality. One should study the ewes carefully and select the ram that is best suited to them. One should buy early from a good breeder and should be willing to pay a good price for a good ram. A ram of the middle wool breed is sufficiently well developed and fit for service at the age of one and one-half years. Older rams are always better breeders than yearlings. There are only a few instances when it would be permissible to allow a ram lamb to head a flock. Hampshire lambs reach maturity at an early age and are often used. To find out whether or not a ram lamb will be a breeder it may be advisable to try him on a few ewes so that, if he proves worthy, he may be used the following year.

The ram should possess good breed type, masculinity and plenty of vigor. He should have a wide deep chest, and an even balanced conformation thruout. It is not well to purchase rams that have been heavily fitted as they often prove to be either not breeders or sire weak lambs.

After the selection of the breeding stuff, it is necessary to diligently care for the flock. By careful selection of rams and breeding these on the grade ewes, one may grade up the flock. After one has gained experience with grades he may buy a few pure bred ewes, and gradually work into the pure bred business.

BUILDING UP THE DAIRY HERD

Factors That Are Necessary in the Improvement of a Breed

GEORGE P. GROUT, Duluth, Minnesota

TO those who already have a successful working dairy, there may be no need of talking improvement, although none of us have begun to reach the limits of possibilities in the live stock industry. It requires ability in the line of selection to start a herd but takes constant thought and vigilance to keep it up to the standard. With the best bred stock there is always a tendency toward revision to a former inferior type, and unless one has ability to see and select the best, a good herd will not remain excellent. In my days of less experience I used to think that extra good stock might likely be found in any herd and therefore it was poor policy to buy foundation animals of experts as their price would be prohibitive. I have learned by experience that a man who does not know and appreciate good stock when he sees it, can not breed fine stock. He may breed one or two by chance, but while chance may produce a wonderful freak, it never fixes a good, uniform, useful type.

In the selection of foundation stock it is well to purchase as good animals as ones pocket book will warrant and from a breeder who knows his business. It is also a good plan to purchase in families. A good animal belonging to an excellent line thru both sire and dam is better than an excellent individual of plain family breeding that has never given results.

There are good individuals in all breeds and excellent producing families among all scientifically dairy bred cattle. The breed that you like best, that prospers under local conditions, and flourishes under your care is the breed

for you to keep. If you like stock and as a breed they do well for you it is poor policy to make a change even though some other man has obtained better results with some other breed. If you are not reasonably successful, you had better look to yourself and see where the trouble lies. You may find some minute detail that alone stands between your herd and success.

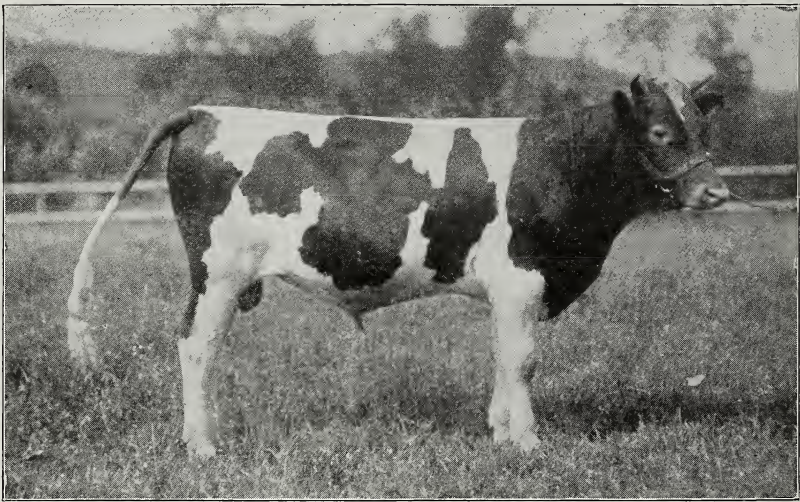
When you have made your choice of breeds and have selected a foundation herd, either pure bred or grades, put all your ability and a good amount of cash into the selection of a good sire. The best your pocket book will afford is none too good. So much has been said and written on the subject of good sires that more and more breeders have come to realize the worth of a truly great bull. Since a boy I have always been an admirer of a great sire and it has been my dream since childhood to some day breed a great animal. I would rather have it said of me that I bred a great sire and had the good judgment to keep him in service than to have it said that I had bred a string of world's champions.

The sire is more than half the herd yet the great sires in any breed can almost be counted on your fingers. The great dairy sire will breed good sires out of almost any dam. You may not have noticed it, but in every breed there are one or two sires that stand out like lone stars in the heavens. Modern dairy methods of record keeping and the popularity of record keeping of official testing have made it much easier to select a good sire, but all do not take advantage of the information given by

the scales and the Babcock test. Agricultural papers and farmer's institute workers are advocating the use of bulls out of tested dams whose records are high.

To obtain the highest results, individuality, long time records, and family blood lines should also be given much weight. Hardiness, medium to good size, strong constitution, correct type for the breed, good production in the near relatives and immediate family, together with high quality should also be sought in a good sire.

summer the farmer makes up his mind to gradually work into the breed and gets one or two pure bred hens and a few roosters. These are used on the Rocks, are kept for the time being but before a complete change has been brought about it is found that the Leghorn type are wild and give no returns in meat. Then as the flock is pretty well mixed it is decided to try a third breed and so it goes. No matter how poor a farmer may be, if he keeps chickens at all there is no excuse for not having a uniform flock. Any one



Starlight's Excelsior of Jean Du Luth

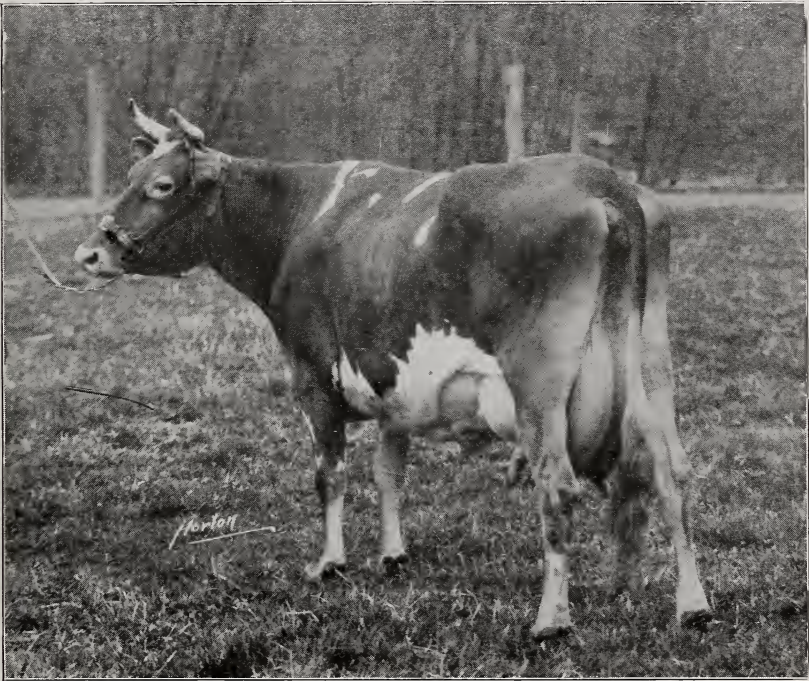
With the beginner in livestock improvement, especially in grade herds the temptation is to switch breeds of sires, every time some enthusiastic breeder demonstrates the superiority of a certain individual within the breed. If you have traveled among farmers in different localities you know how hard it is to find a flock of chickens in a barnyard that are all the same breed, and uniform in type. For a while barred Plymouth Rocks will be used and when it is found that the neighbors hens of white Leghorn blood do not bother so much about setting in mid-

who has mixed a lot of chickens for more than one season has them because he is a scrub breeder, with little tenacity of purpose and because he prefers having scrubs to making a little effort in getting a uniform type.

This brings us to the important point in breeding. Make your selection of the breed you wish to develop and do not cross breed. If a breeder cannot cross families within a breed without danger, how can the farmer expect to cross two distinct breeds without disaster. Do not inbreed but keep to one breed and work along family lines. If

you wish to develop some character in your herd which you do not have, do not attempt to introduce it by cross breeding. Keep within your breed and select a mating having some of the qualities desired. If the same foundation blood lines with the proper "nicks" are found in the foundation herd and the out cross introduced, you are quite likely to find that the progeny of this

champions is because the "nicks" in the champion's blood lines are so perfectly balanced to obtain these high results that the next cross throws out the affinity and unless we can find an equally well bred and balanced pedigree in the animal mated, and of practically the same blood lines, coming down thru not too closely related stock, we cannot look for as high results in



Starlight's Contrast, 682 Pounds Fat

combination will be superior to either of the parent stock.

There are "nicks" in every line of animal breeding if we are but keen enough to find them. For convenience, if you like, you can call it a positive and negative cross. The results seem to be like a current of electricity when you get the proper combination. I believe one good reason why world's record stock do not always produce world's

the progeny as we obtain in the immediate ancestors.

To sum up the whole matter, let us choose our breed and stick to it. If improvement is needed, introduce it from superior animals of the same breed and from closely related families. Do not cross breed only to get a start and then keep building on the same foundation.—[Guernsey Breeders Journal.]

DAIRY ACTIVITIES IN FULTON COUNTY

What Has Been Accomplished by Cooperation and a Working Aim

LOCATED in the northwestern part of the State, Fulton County, Ohio, with its numerous never failing streams, flowing wells, springs and tubular wells, with soil adapted to the growing of alfalfa, clover, cow peas, soy beans, oats, corn, and sorghum offers excellent opportunities for dairying. For many years cheese factories and creameries afforded the only market for whole milk, other than to producers living in the eastern part of the county who could send it to Toledo. With three steam and two electric roads crossing the county, and running into Toledo, all could ship there if necessary. But for the past 12 years condenseries, of which there are four, have been getting the greater part of the milk. There are but two cheese factories and one creamery in the county at the present time.

The Helvetia Condensery, located at Delta, receives annually more than 30,000,000 pounds of milk, and the Van Camp Packing Company, at Wauseon, 23,000,000 pounds, all of which is produced in the county. The Van Camp Company also has a large plant at Bryan, Ohio, which is about seven miles west of the Fulton County line, that gets about 7,000,000 pounds of milk from Fulton County. The Ohio Dairy Company at Morenci, Mich., about one-half mile north of Fulton County line, receives about 20,000,000 pounds annually, about 7,000,000 pounds coming from this county. From the Morenci plant, the Ohio Dairy Company ships a car load of bottled milk to Toledo each day. The two cheese factories get, approximately, four million pounds of milk. From all parts of the county

cream is shipped to Toledo, while from the eastern part, milk is sent there for retail trade.

The dairymen of the County realize the value of pure bred sires with a known ancestry. They are awake to the fact that less than 2 per cent of the cows of the United States are purebred, that the demand far exceeds the supply of good cows and that this demand is growing faster than is the supply.

In August, 1914, the Fulton County Holstein Friesian Association was organized with a membership of 35. L. E. Connell of Fayette, was elected president; W. H. Standish of Lyons, vice president; and Jay C. Burr of Wauseon, secretary-treasurer. The motto of the association is "More and better cows for Fulton County" and every member seems to have adopted it. The membership of the association now numbers 80. The number of purebred cattle in the county is around 1500 and if the present activities are continued it may be safely predicted that there will be 3000 in the county in 5 years.

Five cows in the county have made world's records, six have records above 30 pounds of butter in 7 days and eleven have yearly milk records above 24,000 pounds. Nineteen cows during the year ending May, 1916, won prizes offered by the Holstein-Friesian Association of America. Sixteen 2-year-old heifers have produced an average of nearly 20 pounds of butter in 7 days.

The cows in the county with records of 30 pounds of butter or better in 7 days are: Crown Princess Maxie De Kol 2nd, Lindenwood Hope and Aaggie Beauty of Lindenwood owned by G. W. Rising of Fayette; Royalton De Kol

Fern and Royal De Kol Calla owned by W. H. Standish of Lyons; and Royalton De Kol Violet owned by H. A. McQuillin of Delta. Some of the semi-official records made by cows bred and developed in the county are Lindenwood Hope with 1164.3 pounds of butter from 20,404.7 pounds of milk, owned by G. W. Rising; Jolie Johanna Netherland, butter 1057.8 pounds, milk 27954.6 pounds, owned by Burr Brothers of Wauseon; Lady Wadna, butter 1002.8 pounds, milk 22912.1 pounds,

a 32 pound son of Pietertje Hngerveld Segis, the junior sire, in the Burr Brothers herd at Wauseon. Johanna Concordia Champion, the senior herd sire in L. E. Connell's herd is proving himself a great sire. Twenty-one of his 2-year-old daughters have made 7-day records, eleven of which average nearly 20 pounds of butter. "The Milk and Butter Champion," the junior herd sire in L. E. Connell's herd is by Duke Ormsby Pietertje De Kol 3rd, a son of Lindenwood Hope and out of Irma Gilt



The Milk and Butter Champion Holstein Bull

owned by H. A. McQuillin; and Irma Gilt Edge Queen 2nd, butter 948.6 pounds, milk 26,745.3 pounds, owned by L. E. Connell.

Irma Gilt Edge Queen 2nd was the first cow under 5 years of age to give more than 26,000 pounds of milk. Royalton De Kol Violet bids fair to be the champion milk cow of the world. At 8 months after she calved, she was in the lead and was still going at a merry clip.

Sir Korndyke Queen, a 31 pound son of Pontiac Korndyke is the senior sire and Prince Pietertje Hengerveld Segis,

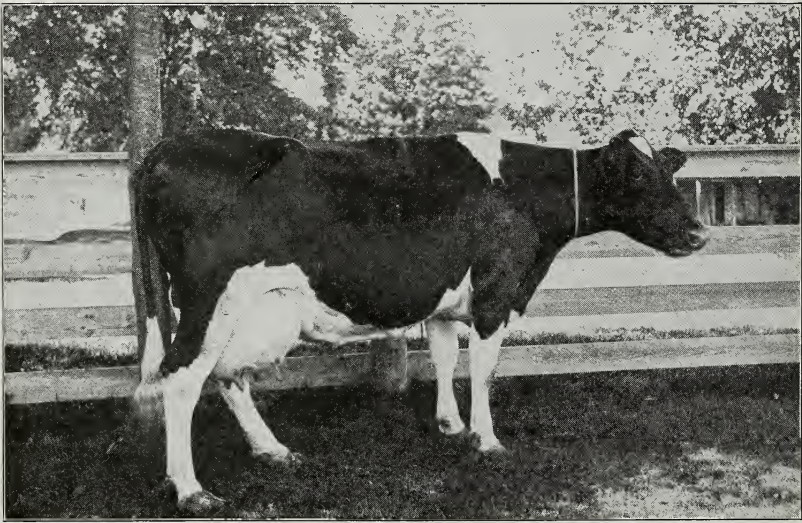
Edge Queen 2nd, the champion senior 4-year-old milk cow. This youngster enjoys the distinction of being the only animal living or dead whose dam is a world's record milk cow and whose sire's dam is a world's record butter cow. His breeding coupled with his individuality bespeaks for him a great future. Risinghurst Johanna Ormsby Hope by Johanna Concordia Champion and out of Lindenwood Hope is the sire in the herd of G. W. Rising.

A proposition from the County Holstein Friesian Association to the Fulton County Fair Association to the effect

that the Holstein Association would give a certain amount if the Fair Association would give a like amount to be used as premiums to exhibitors of Holstein cattle at the Fair was accepted. The Fair was held at Wauseon in September and the result was certainly satisfactory. When the entries were closed there were 132 black and white cattle owned by breeders in the County arranged in 5 tents provided for the occasion by the Fair Association. This was a show which in point of individu-

was not at all surprising that his judgment differed from some of the bystanders. Plans have already been formulated for the show next year and to encourage the breeders to give more attention to fitting the cattle for the fair larger premiums will be offered.

The members of the County Holstein Association feel that their efforts as an association and as individual breeders are being rewarded and appreciated and that the good that will come from their cooperation will be far reaching.



Irma Gilt Edge Queen 2nd, 948.6 Pounds Fat, 26,745 Pounds Milk

ality, breeding and number would have been a credit to any state fair, yet seldom seen there.

In the list there were six calf herds, eight young herds, six graded herds, 26 yearling heifers, 21 two-year-olds, 12 aged cows, 12 yearling bulls, four aged bulls, and eight herds of five each shown as get of sire. The judge had no small job to place the awards and it

Dairying in the county is still in its infancy when it is considered that the first purebred cattle were brought into the county only 15 years ago and that the real development of the industry began 2 years ago when the Holstein Association was formed. The results that have been accomplished in the 2 years existence are an example of what may be done thru cooperation and a working aim.

PROMOTE DAIRY BUSINESS BY PRODUCING CLEAN MILK

Prejudice Against Its Use Due to Filth Great Obstacle

DR. J. H. KELLOGG, Battle Creek, Michigan

FOOD is to an animal what the earth is to the plant. It is the soil out of which we grow. What we eat today is walking around and talking tomorrow. Food is simply sunshine captured by the chlorophyll of plants and served to us in tiny bundles called molecules, which when torn apart in our bodies by the process of digestion and assimilation release the captured energy which warms us with heat brought from the sun and shines out in human thought and action.

The feeding of animals and men has come to be recognized as the most pressing and vital of all economic problems, a fact emphasized at the present time by the critical situation in Belgium, Poland, and Germany.

It has been clearly shown that the quality of the food intake is just as directly and as closely related to the question of human efficiency as is the quality and the quantity of gasoline to the efficiency of an automobile.

The human body is a machine which may be likened to a locomotive,—it is a self-controlling, self-supporting, self-repairing machine. As the locomotive rushes along the iron road pulling after it a thousand ton cargo of produce or manufactured wares or human freight sufficient to start a town or stock a political convention its enormous expenditure of energy is maintained by the burning of coal from the tender which is replenished at every stopping place. The snorting monster at the head of the rushing procession gets hungry and has to have a lunch every few miles along the way. After a run of a hundred miles or so the en-

gine leaves the train and goes into a round house for repairs; an iron bolt has dropped out or a brass nut has been shaken off. Every lost or damaged part of the metal leviathan is replaced, and then it is ready for another century run.

The human body is much like the locomotive. It pulls or carries loads, it expends energy, it consumes fuel and has to stop at meal stations to coal up, it has to go off duty periodically for repairs. The body needs just what the locomotive needs, fuel to furnish energy and material for repair of the machinery.

Food differs from fuel in that in each little packet of food done up by mother nature there is along with the fuel for burning, a tiny bit of material to be used for repair of the machine. In other words, food represents in its composition both the coal and the metal repair materials of the locomotive. The starch, sugar and fat of food are the coal and the protein or albumen is the metal repair stuff. Here we see at once the reason why starch and sugar and fat are abundant while protein or albumen is in quantity a minor element.

Water and salts are essential to meet the body's needs, especially the various mineral elements, lime, soda, potash and iron. All these we must have,—lime for the bones and nerves, soda and potash to neutralize the harmful acid produced by combustion processes, and iron for the blood. All these are found in normal foodstuffs but in varying proportions, so that a large variety of foods must be eaten to make sure that each of the different food princi-

ples are required for nutrition are supplied.

In recent years science has discovered another property of food. Natural food contains vitamins. It has been known that a rice diet sometimes causes beri-beri, a form of general neuritis, and that a diet of dry cereals and preserved foods, in time gives rise to scurvy; but the reason was a mystery. It was learned that the real cause of beri-beri is the lack of vitamins which are associated with the bran of cereals and so are removed in the process of polishing rice and in the bolting of wheat and other grains.

There are several kinds of vitamins. Some are associated with the bran of cereals, others with the juices of fruits. Some are easily destroyed by heat, while others survive a boiling temperature. Vitamins do not enter into the composition of the body, as do other food principles, but they are somehow necessary to render active the various subtle elements which are essential to good nutrition.

Milk a Complete Food.

Milk differs from other food substances in that it is a complete food. In the case of adults it needs to be supplemented by other foodstuffs, but it is for the young infant when properly diluted, a perfect food. It contains in excellent proportions, all the elements needed by the growing child, which is not true of any other known substance.

The fuel element is represented in milk by fat and sugar of milk. The fat is of a sort easily utilized by the body. The sugar of milk is a product adapted to the needs of the body, superior to cane sugar and free from the unwholesome properties of the products of the sugar cane. It is found no where else in nature except in the

milk of animals. Milk sugar is slowly digested and absorbed. This enables it to reach the lower intestine where it is converted into lactic acid and so prevents the putrefaction to which modern science has traced a great number of the maladies of both infants and adults.

It is due to the presence of lactose that milk sours while meat putrefies. Nearly ten years ago I placed in a jar of buttermilk a raw beefsteak to which no antiseptic of any sort had been added. The beefsteak is still intact, due to the anti-putrefactive properties of milk sugar and the acid forming bacteria which it feeds.

In the case of milk is found material for growth and repair, and in a form favorable for digestion and assimilation. There are also other proteins in milk which serve the same purpose.

Milk is also rich in salts, being particularly rich in lime. A pint of milk contains 16 grains of lime, more than is found in a pint of lime water. Note the contrast between milk and beefsteak, or flesh food of any sort. Meat supplies only half a grain of lime to the pound, although containing twice as large an amount of solids as does milk. The reason for this is obvious. Milk is a substance provided by nature as an excellent food for a growing animal, and so must furnish lime for the bones as well as protein for the muscles. Meat represents but a fraction of the original foodstuffs. When corn or other food is eaten by an ox, the several elements are separated, each going to form its own tissue, fat to fat, protein to muscle, and lime to the bones. So to get back to the whole assortment of food principles fed to an animal, one must eat its entire body, the whole ox or the whole

hog, bones and all. This being impossible, nature has supplied us in milk with bones, muscles, brains, nerves, every bodily structure in solution, and in an attractive form.

Another quality of milk is its richness in vitamins. In this respect milk is unique and superior to other foodstuffs. Of ordinary foodstuffs each provides its own sort of vitamins. These substances are said to be produced only by vegetables. The vitamins of milk are not produced by the cow, but only collected by her. As she browses about the pasture she selects the various sorts of grasses, twigs, leaves and stems which suit her needs and with them gathers an assortment of cell stimulating, life-saving vitamins which are possessed by no other known substance.

Milk Should Be Uncooked.

Pasteurizing, that is, heating to a temperature of 158 degrees F. destroys the anti-bodies of milk. When milk is heated to a temperature of 176 degrees F. the digestive ferments which it contains are destroyed. Boiling of milk modifies in a harmful way nearly all its ingredients and considerably reduces its nutritive value. Rats fed on boiled milk grow to only half their normal size. Scurvy sooner or later appears in babies exclusively fed on pasteurized or boiled milk. The subtle alchemy by which milk is prepared in the laboratory of nature is upset by the crude process of cooking. Boiled milk will sustain the life of rats but it will not enable them to grow to full development, and reproduction fails altogether. Science is teaching every day that the fine adjustments and adaptations of nature cannot be safely ignored. We are gradually learning thru the loss of millions of lives which have perished thru ignorance,

that the foodstuffs which nature designed for our use are not haphazard products of wild and incoherent forces but are wrought out by a subtle and infinite wisdom which fits them to our needs.

Milk Must Be Clean.

The chief reason assigned for the pasteurizing or sterilizing of milk is the presence in the milk of large or small quantities of filth which should have been left in the stable or the barnyard. Clean milk obtained from clean cows kept in clean stables, collected in clean receptacles and distributed in clean vessels, is the choicest of the products of nature. Dirty milk, corrupted with gleanings from the dung heap, the chicken coop, the pig pen, and other sources of pollution, is a veritable poison cup, and is doubtless responsible for the loss of at least nine-tenths of the 300,000 infant lives which are every year sacrificed to ignorance and neglect.

Milk Free From Disease Germs.

In addition to the common organisms which give rise to putrefaction and with which milk becomes contaminated thru careless dairy methods, milk may contain germs of various specific diseases such as tuberculosis, typhoid fever, diphtheria, scarlet fever, sore throat, Malta fever, maladies originally derived from human beings suffering from the above named disorders and with the germs of which the milk, by direct or indirect contact, become contaminated.

Milk may also communicate to human beings various disorders which originate in cattle, but which may be communicated to human beings by making use of milk of sick animals, such as foot and mouth disease, milk sickness, anthrax, cowpox, rabies, and perhaps other maladies. Modern research

has shown that bovine tuberculosis is communicable to human beings. According to Rosenau, it must be conceded that not less than five to seven per cent of all cases of human tuberculosis are due to infection from the use of infected milk or the flesh of tuberculous animals. A careful examination of the mortality tables published by the U. S. Census Bureau shows that not less than 3,000 children die annually as the result of infection with bovine tuberculosis, and not less than 60,000 children are constantly suffering from bovine tuberculosis contracted chiefly thru the use of diseased milk.

As the public becomes better informed respecting the dangers and causes of tuberculosis thru the efforts of Boards of Health and Anti-Tuberculosis Societies, the apprehension of danger from the use of milk is going to be greatly increased and this will naturally lead to less consumption of milk and dairy products. The average citizen is daily becoming wiser in relation to foods and he is no longer willing to close his eyes and swallow without question whatever is presented to him.

In my opinion the greatest obstacle in the way of the dairy business in this and other civilized countries is the prejudice which in recent years has been developing in the public mind against the use of milk containing barnyard filth with germs of barnyard and pest-house diseases. The chief opponents of the dairy business are physicians and the manufacturers of baby foods. Physicians are continually warning mothers to beware of the milk supply and the manufacturers of baby

foods are waxing rich from the sale of wheat flour with various slight modifications at prices a hundred times the original cost and actual value. When dairymen are able to supply the public with clean milk, free from barnyard dirt and disease-producing germs, baby foods will disappear from the columns of the country newspaper and from the shelves of the corner drug store, and the consumption of milk will increase many fold.

The best way to promote the dairy business in this country is to first induce the American dairymen to produce clean milk, free from stable filth and disease from cows, and then to convince the American people that the readiest way in which they can escape becoming a toothless, boneless, and spineless nation is by the increased consumption of milk. It is evident that milk as a food product is worthy of all the consideration which is given it, and that the advantages which may be obtained by the general application of the well known methods of scientific dairying will place the business of milk production in the forefront of our food resources and will so raise the value of milk in the estimation of the average man, that an appreciative public will not only be willing but glad to pay for the pure, clean disease free products of the dairy of the future a price which will be an adequate return for the labor and investment required for its production and leave a margin of profit sufficient to make of every owner of a good herd of dairy cattle a real American aristocrat.

LIVESTOCK STORIES PICKED UP IN OHIO

Old Delia, the "Iron Cross" Mare; Ideal, Breeders' Association Futurity Winner

CLARENCE M. BAKER, '16

WHEN George A. Dix and Otho Pollock were graduated from the College of Agriculture, Ohio State University, in the spring of 1912, both returned to their home farms in Delaware County where they had already started to breed Percheron horses. They had specialized in animal husbandry while in the College of Agriculture and gave particular attention to the breeding of purebred horses.

litz, Contingy, Jules Caesar, Jap and Jadio were added to the draft type already produced by the use of the early sires. Unfortunately for Ohio, at an early date, Napoleon passed to Illinois, but some of the horses tracing directly to Normandy are still to be found among the most highly-prized American-bred Percherons in Delaware County.

Thus the Percheron was held most



Delaware County Percheron Exhibit at Ohio State Fair

Percheron horses had been bred in Delaware County since the 50's when the first importation ever brought to Ohio found their way to the fertile flood plains of the Olentangy River in that section. Scarcely had the pioneer's axe tasted of the forests and small clearings began to appear along the corduroy roads than Normandy, more commonly known as "Pleasant Valley Bill" or "Valley Horse," Nonesuch, Baker Horse, Napoleon, Mingo Chief and the Conqueror were brought to the county. Later on Greleuchet, Auster-

litz in the eyes of the Delaware County breeders and even tho "hard-times-prices" for horses made breeding unprofitable at times, the love for the Percheron did not languish.

However, until 1913 no real cooperative effort or plans had ever been made to assist in the disposition of the surplus breeding stock altho many sales were made individually. Draft mares were selling only a little higher in price than geldings and most of the young stallions were picked up by dealers who developed and fitted them for sale.

Thus the margin of profit was generally secured by dealers and not by the farmer-breeders who were producing the young stock.

The matter of cooperative selling organization had been talked of for some time and when Dix and Pollock began to direct their breeding operations more extensively the organization of a selling association was turned over to the younger breeders in the County. Dix is now vice-president of the association and has about 25 purebred horses on his farm including 9 stallions, breeding mares and young colts. Pollock is secretary of the organization and is also

\$1600 each, practically all the surplus stock being sold as soon as it is ready for the market. When a buyer comes to the county, the secretary who is located at Delaware gives him a list of all stock ready for sale. Each animal offered for sale is classified according to breeding, age, sex, color, weight and price. Then the buyer is taken in an auto to the breeders whose classification seems to meet his wants. In this manner the buyer can look over the horses owned by ten or twelve breeders in one day.

Practically all the mares and stallions are worked the year 'round, many of



Percherons on Farm of George A. Dix

raising a number of purebred Percheron colts each year.

At the present time the association has 85 members all living within a radius of 12 miles. In this area there are approximately 250 breeding mares and 20 stallions; practically all the mares are American-bred Percherons but a few imported stallions and sires from other states are brought in annually. A few purebred mares are bought by breeders each year but only two members of the association have been importing breeding stock.

During the past year more than 40 horses both stallions and mares were sold at prices ranging from \$300 to

the breeders carrying on all their farm operations with the purebred Percherons and having little trouble from disease or accidents. Dix during the corn planting season last spring had five stallions in the field at one time. Thus the breeding of purebred horses is not a sideline but a regular farm routine returning the maximum profits in horse rearing. The breeders in the association all use practical methods. The horses are raised unpampered, are developed under natural conditions and are the offspring of mares who can earn their keep in the harness. They are bred for practical draft purposes, size, scale, bone and feeding qualities with

all the style, action, quality, finish and Percheron type that can be developed in an ideal draft horse.

The membership fee of the organization consists of a nominal sum per year all of which is used for advertising purposes. Ads are kept in four livestock papers and circulars are distributed by members of the association at fairs and agricultural gatherings. Exhibits at fairs, especially the Ohio State Fair and the Delaware Pumpkin Show serve to keep buyers in touch with the association and the kind of animals produced.

New York and Ohio with the production of Holstein cattle.

"Old Delia."

How many farmers are there in the corn-belt who make their farm mares contribute to the labor income of the farm more than possibly their labor or perhaps a scrawny, crooked legged, sour-headed, mean dispositioned animal which never is worth more than \$150 at any time of their life? Perhaps the record of "Old Delia," a flea-bitten, gray mare owned by Mike Lyons, Dela-



Percherons on Farm of Otho H. Pollock

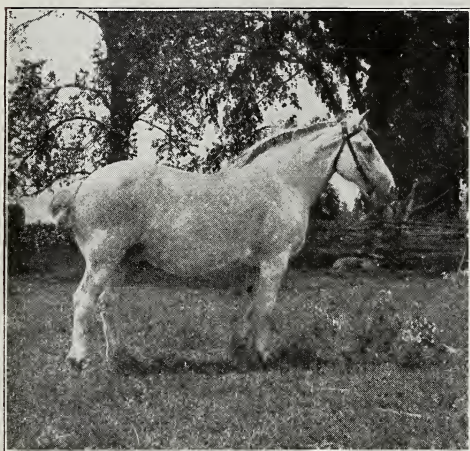
Quite a number of Percheron awards at the Ohio State Fair have been given to members of the association as well as prizes at other state fairs and livestock exhibitions.

Delaware County has been pronounced by buyers as the best American-bred Percheron section in the United States, its name being associated quite frequently with horses produced in that locality. However, this reputation has come about to a much greater extent since the organization of the selling society. Percheron horses are associated in Kentucky and parts of Michigan,

aware, Ohio, shows some of the possibilities in breeding purebred horses which will contribute more to a farm prosperity than any other project—yet be a sideline. "Old Delia" might not grace the rings of an aged mare class at a horse exhibition but if ribbons are given for merit in raising colts she deserves an "iron cross."

"Old Delia" is now 14 years old and has produced in that time \$5,320 worth of colts besides earning her keep by doing daily work in the harness. She has added to the income of her owner more than \$500 for the past 10 years and

now has a promising colt by her side. When four years old her first colt sold as a yearling for \$175; her second sold at 6 months for \$145; the third at 2 years for \$725; the fourth at 3 years for \$550; the fifth at 2 years for \$725;



the sixth at 3 years for \$500; the seventh at 2 years for \$900; the eighth at 22 months for \$1,100 and the ninth at 11 months for \$500.

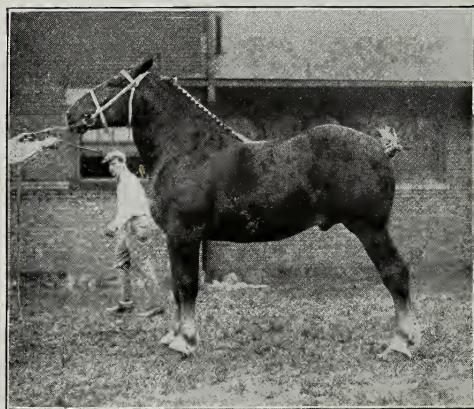
"Old Delia" is a purebred Percheron and has a pedigree which traces back to Jean Blanc, commonly mentioned as the foundation head of the Percheron breed in France. She is bred to stallions kept by members of the Delaware County Percheron Breeders' Association at Delaware, Ohio.

"Ideal."

Ideal stood in his closed stall at the Ohio State Fair last year groomed in the neatest manner and rubbed down until his coat of hair glistened even in the darkened apartment. His owner, Charles Wentz of Kirby, Ohio, had been breeding Belgians for a number of years and Ideal had been named only after careful consideration of the other colts he had fed and raised into champions.

Wentz watched the Belgian judges in the show ring size up the aged mares and stallion, the three-year-olds, and the two-year-olds with considerable satisfaction. He looked too at the large number of colts entered in the Belgian stallion futurity but with little fear of what place Ideal would occupy when judges would cast their eyes on the yearling ring. Ideal being in the closed stable did not receive the scrutinizing glances as did other horses entered for the futurity purple; in fact Ideal was hardly known when he was led into the show ring.

Ideal stood third in the ring when the judges began the last arrangement before passing out the ribbons. His unusual size coupled with quality, a block conformation, unusual underpinning and a clean head soon caught the eyes of the judges and Wentz's ambition was realized. Ideal won the purple. With calm actions Wentz started out of the show ring with Ideal toward



the closed stall when a smooth-faced man stepped up. "Your horse deserves it" he said, "would \$2000 pay you for your bother in raising the animal?" And Ideal was added to the stable of J. Crouch & Sons of La Fayette, Ind.

Margaret Lowery.

Margaret Lowery of London, Madison County, Ohio, knows how to wash dishes, bake bread, and do house work; she has demonstrated this. But what might be more surprising she can extend her activities to more interesting projects than even home economics. In short Margaret Lowery is state champion of the pig growing clubs in Ohio.

Margaret's record as a feeder is exceptional. The initial combined weight of her pigs was 111 pounds. She fed both for 83 days and at the end of that time they tipped the scales at 441 pounds making a gain of 330 pounds. Their average daily gain was 1.99 pounds. The total cost for the grain was \$12.41

or a cost of 3.76 per hundred pounds for the pork produced. (Corn was estimated to be worth 70 cents per bushel.)

When the pigs were weighed at the Madison County fair, Margaret was announced the winner in that county. At that time she could have sold her pigs at \$9.50 per hundred pounds; this would have made both of the pigs worth \$51.90 or a profit above feed cost of \$29.48. Margaret used only feeds that were most available from her father's farm—mainly skim milk and corn. Her profit amounted to approximately 230 per cent. How many farmers realize this much on their hog feeding projects?



Margaret Lowery, State Champion of Pig Growing Clubs

ACTIVITIES OF U. S. BUREAU OF CROP ESTIMATES

How Crop Information Is Obtained and Given to Public

LEON M. ESTABROOK, Chief

TO supply accurate information to farmers and to the public regarding the condition of crops and of prospective yields, the Government established the bureau of crop estimates which publishes a monthly and annual report. In the reports are about 65 different crops and classes besides monthly reports on prices. Included in the report of a single crop the acreage, the condition of the crop from the time it is planted until it is harvested, the quality, the proportion marketed, the prices and the amount of the crop in the farmers' hands. Reports on special inquiry are also made concerning farm machinery, planting and harvesting, utilizing and disposing of crops, farm building operations and on crop conditions in foreign countries.

The aim of these reports is to give the farmer an idea of crop conditions so that he may harvest his crops to the best advantage; buyers and dealers to judge the probable supply and demand and future trend of prices; transportation companies an estimate of how many cars will be required to move the crops promptly; and bankers, dealers and jobbers an estimate of how much capital and supplies will be needed by the farmers. The issuance of these reports also tends to prevent the circulation of misleading reports by irresponsible parties who are tempted to give out such crop information as will influence prices in their favor.

The bureau has an office force with headquarters at Washington and a field force in every state. The office force has three divisions: administrative which includes the chief, and assistant chief of the bureau and the chief clerk

who directs the activities of the bureau; a division of crop reports who mail about 2,500,000 schedules and sort, tabulate, and average the returns from the field force; and a division of crop records who analyze and summarize official crop reports and agricultural statistics from foreign countries and conduct social investigations. The field force consists of a salaried field agent in each state, several crop specialists and about 150,000 voluntary crop reporters. The crop reporting board which consists of the administrative officials and one or more field agents called in each month prepares the monthly crop report for issuance by the department.

Obtaining the Data.

Schedules of inquiry are sent regularly to about 35,000 township reporters, who report upon the crops of their immediate neighborhoods, and to about 3,000 county reporters, who, report for their entire county, basing the report on personal knowledge and observation which is supplemented by information obtained from a small list of selected aids who report directly to them. These crop correspondents send their reports directly to the Washington office, where each class is tabulated separately by states, districts and counties. Additional schedules are sent to the field agent, the crop specialists, and aids, each field agent having from 250 to 1,500 aids, and each crop specialist from 200 to 8,000. Each month the field agents and crop specialists travel by rail, automobile or other special conveyance thruout the important producing sections of their territory, personally inspecting crops and interviewing well informed growers. Upon returning to

their field stations at the close of the month they tabulate the returns of their aids and forward written and telegraphic reports directly to the department.

The dates and hours on which crop reports are issued are determined for the entire year by order of the secretary issued the preceding December. On the afternoon preceding a crop report day all telephones in the bureau are disconnected. On the following morning all outside doors of the bureau are locked and guards are stationed outside to prevent any one from entering or leaving the bureau after the board has assembled and before the time set of the issuance of the report. The crop reporting board meets in the office of the chief of bureau with a force of computers and operators of duplicating machines in an adjoining room, the doors of both rooms being locked to prevent communication with the remainder of the bureau. These precautions are taken to prevent any one from obtaining information in advance regarding the report prior to the moment of its release.

Issuing the Crop Report.

At the time set copies of the report are given to representatives of the press who are waiting for it in the corridors and who immediately telephone or telegraph the results to the press associations, to the various exchanges, and to the principal newspapers in the different states. The department also sends a code telegram immediately to the weather bureau station director in each state, who has previously been provided with a skeleton form and who sees that the new figures are at once inserted and a sufficient number of copies printed and mailed the same day to all local newspapers in the state. The manuscript report is sent to the public printer and in the course of a few days

about 160,000 copies of the monthly crop report are printed and mailed to crop reporters and others whose names are on the mailing list. The telegraphic and telephone reports of representatives of the press usually appear in the afternoon papers. The department's final estimates of live stock and crop production appear in the appendix to the Yearbook for a long series of years and are available for reference, study, comparison and analysis.

Crop Condition Reports.

Crop condition reports of the bureau are based upon a percentage of normal. While some confusion exists as to the exact meaning of the word "normal," because it is not an exact measure of quantity or quality, and is different for each locality and even for each farm or field, it nevertheless has proved to be the most satisfactory standard which the bureau has tried. The "normal" is used by the bureau as the equivalent of "crop expectation." When a farmer plants a given field to a particular crop, he knows what that particular field has produced in the past and the condition of soil preparation, fertilizer, cultivation and season under which the crops were produced; so that he knows pretty well what he ought to expect in the way of production under existing conditions of soil preparation and cultivation, provided average climatic conditions prevail to harvest time. He knows also how the growing crop ought to look at different dates during the growing period. The conception of normal which a farmer has for a particular field or crop, that is how it ought to look at a particular time and what it ought to yield under average conditions, is applicable to an entire neighborhood, county or state. The individual reporter is asked to represent his conception of normal by 100 and to express his esti-

mate of the present condition of a crop as a percentage of normal. A particular advantage resulting from the use of the so-called "normal" as a standard for estimating crops is that it can be applied to all parts of the United States, where the average production in one section may be nearly 20 bushels of corn per acre, while in another it may be 60 bushels per acre, and the estimates for any year are strictly comparable with those of any other year.

Accuracy of Crop Estimates.

Crop production forecasts are actually such figures that, based upon average conditions in past years, there is an even chance or probability that the final yield will be either above or below the figure forecast. The best test which the bureau has of the accuracy of its estimates of any crop is that afforded by the census reports of cotton ginned. All cotton is ginned and every bale that passes thru the gins is re-

ported to the bureau of the census, so that at the close of the season, in March, the total number of bales is known exactly. The estimate of the bureau for last year's cotton crop, issued in December, 1915, was within $\frac{1}{4}$ of 1 per cent of the number of bales reported by the census as having been ginned up to March 20, 1916.

Future of the Crop Reporting Service.

Because of the increasing demand for details of crop production the crop reporting service will undoubtedly become more highly specialized in the future and more attention will be paid to special crops and to the details of staple crops, such as estimating acreage, condition and production of horticultural varieties, or of crop yields in particular regions or zones. Efforts will be made to improve methods of crop reporting thru better cooperation and coordination between national, state and local organizations.





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COLUMBUS, OHIO, NOVEMBER, 1916.

EDITORIAL

LIVESTOCK ASSOCIATIONS.

An encouraging feature in the development of the livestock industry in Ohio is the formation of breed associations. One of these is found in the Percheron Breeders' Association of Delaware County and another in the Holstein Association of Fulton County. Thru these associations progress is being made in the breeding of horses and cattle.

The reputation which these communities have made with their purebred animals is spreading rapidly. The attraction that they give to buyers is not a little and seldom do days pass when there are no buyers present in these communities. These buyers come because they know they can buy all the animals of the breed they wish and with

a small amount of labor and expense.

The work of these associations has shown that larger profits can be made by farmers than when they work alone and it has also been shown that it is an efficient form of cooperation. The livestock breeders of these communities appreciate these facts and the larger part of them are converted to community breeding.

There are large sections in Ohio where the farmers have not been able to agree on the breed they will handle, tho progress has been made in this direction. In bringing about community cooperation in livestock breeding it will first be necessary to get the breeders acquainted so that they can get together and discuss the breeds that should be selected.

By cooperating to a greater extent and laying aside prejudices and breeding one class of livestock in a community, the breeders in a community will be able to make a greater profit. Instead of one farmer in a community breeding Shorthorns, another Herefords, another Angus and so on, concentrating on one class of livestock will enable them to breed better and thus gain a reputation for their stock over the state.

The formation of these organizations is a sign of progress in livestock production and is being found in increasing numbers not only in Ohio but also in the states of the Middle West. They indicate that farmers have learned that there is strength and profit in cooperation. This movement should be encouraged and extended to more counties in Ohio.

ECONOMY IN FARMING.

With the increase in the price of land the problem confronting the farmer of making a living and a fair profit for himself becomes more difficult. It is necessary therefore for the farmer to work out a system on the farm whereby he can increase the saving and economy by cutting down the wastes on the farm as well as to make the farm a more permanent business.

There are many large farms that are run at a loss to the owner or operator. It is an easy thing to buy costly farm equipment and employ farm help to operate them, but it is a different thing to conduct such enterprises profitably. In riding thru the country at this season of the year when the harvest is finished one may see farms where things are put away and the place presenting the appearance of neatness and thrift, while at others one will see old haystacks that are only a heap of discol-

ored feed fit for the manure pile, the manure in piles outside leaching away and out about the farm machinery rusting and rotting.

If the farm with its increasing cost is to be made a source of profit to the farmer it is imperative that the leaks caused thru carelessness and shiftlessness should be remedied. The hay in the stacks that are rotting down is worth a certain price in the market or as feed for livestock. Everything in the way of crops on the farm has a commercial value and anything that contributes to their waste results in just that much loss to the farm account.

It will pay the farmer to save everything that the farm produced and turn it to some account on the farm or in the markets. The saving and economical management of the farm is what gives it character and this is shown in the system of doing things. By stopping the leaks caused by the wastes and lack of a systematic management the farmer will not only increase his profits for the time being, but he will also put his farm on a more permanent business basis.

FARMERS' INSTITUTES.

With 429 farmers' institutes scheduled for this year, the farmers of Ohio will be given an opportunity to profit directly from information given out by the agricultural colleges and experiment stations. There is no form of education that appeals more directly to the farmer than does this farmers' organization. It is closer to the average farmer than any other agency that has been employed to interest him in better farming.

These farmers' institutes appeal to the farmer as a means of help and assistance to more successfully direct the affairs of the farm. It is his school of training and he is responsible for its

success. Farmers' institutes where they have been organized with a spirit of earnestness have developed into a progressive institution, and as a factor in educational work they have been the life and energy of their communities.

Best results in farming are obtained thru organized effort, of which there has been none attempted among the farming classes that has exceeded the organization in these meetings of farmers where they may meet and study farming under the experience of expert instructors. It is the most direct educational influence that the farmer can enjoy.

Not only may the farmers' institute benefit the farmer thru its furnishing a direct form of education, but it can also furnish a means by which the farmers of a community may get together and plan and conduct activities that are of community interest. The breeding of better stock, conducting lecture courses during the winter and other work may be taken up by this organization. Activities as these would show that the money spent by the state in farmers' institutes was well expended and was making for the betterment of farming and farm life.

BETTER LIVESTOCK.

An important factor in successful livestock farming is the ability of the farmer to judge quality and lack of

quality in the livestock kept on the farm. If it pays to keep a poor grade of horses, cattle, sheep or hogs on the farm it will pay a higher profit to keep better stock.

If the farmer would look ahead a few years and see the results that would come from stocking up his farm with good animals of desirable breeding and quality, yet eating no more and costing less to maintain he would see that the same amount invested in the good quality animals would have made him well off. It does not matter in what kind of stock the money is invested, the results are in favor of the good stock.

When poor stock are found on a farm it is usually an indication that the farmer is not extending his business vision as far as he ought to or he would see that he could better himself by raising better livestock. There is no reason why the farmer should be raising scrub stock anymore today. They can be obtained more cheaply, quality and results that may be expected considered, than can the scrub animals. It is necessary that the livestock farmer be a good judge of livestock if he is to follow his breeding operations successfully.

ACKNOWLEDGMENTS.

For the illustration on the frontispiece we are indebted to The Farmer's Review, Chicago, Illinois, which is edited by Charles E. Snyder, '09.



A THANKSGIVING HOME COMING

TRELL W. YOCUM, Cleveland, Ohio

ALL day long steel-gray clouds had drifted out of the northwest and as the moody November night descended on the little railway station in northeastern Indiana, all things seemed to indicate that bitter, biting weather would usher in the Thanksgiving morning. The east bound train was three hours late and the writer resigned himself to a dreary wait. Intermittently between the blasts of the wind came the click-click of the telegraph instrument mournfully accompanied by the peaceful snore of the operator. I must have fallen into a light sleep for suddenly I was awakened by a sweep of wind thru the open door as a man entered. From the rays thrown by the tin reflector back of the sickly kerosene lamp I could see that my companion was a well-built man who looked to be about 60 or 65 years old. His hair, once dark, was streaked with gray but in his eyes was a sparkle that made one think of him as only an overgrown boy. His face was well rounded for a man of his age and around the corners of his mouth flickered a merry smile.

"This night is surely a hummer for November," he ventured. It was a kindly voice and from its pleasant tone I knew that I had found a cheerful companion.

"Yes," I replied, "and it makes it even more disagreeable to lose a part of your night's sleep, particularly when you are going home for Thanksgiving."

"Going home?" he inquired sympathetically.

"Yes," I replied, "I always want to be home at Thanksgiving time."

An expression of sadness crossed his face and his voice was gentle as he said, "My friend, if it won't weary you

I'll tell you the little story of my first Thanksgiving home-coming. I know what it means."

I needed acquaintance and for some moments looked dreamily out of the window into the night. Finally he turned slowly toward me and began his tale.

"My father's farm was located in quite a fertile region in central Ohio and there I was raised. I went to the country school the whole term when a little chap but when I grew large enough to 'make a hand' I was permitted to go only during the winter months. However, Mother always put the best of books in my hands so my education wasn't so badly neglected as it might have been. From the time I was 15 years old I had a fool notion that I was intended for some other work than just an ordinary farmer's, and continually I kept building lofty air-castles for the future. I had done considerable speaking at farmers' picnics and other occasions and it finally reached such a place that everyone who met my father would say, 'Joe, you're not goin' to let Tommy be just a common farmer, are you? He'd make a crackin' good lawyer for he's got talent along that line.' I heard so much of this that it wasn't long until I felt sure that the hand of destiny was directing me toward the law.

"Mother was in favor of my choosing my own vocation at that time but I had thought that I would wait until older before making a final decision. I was but 18 at that time and perhaps because he opposed me I became more determined than ever to take up the study as soon as possible. Mother pleaded with Dad in my behalf and at

last he said, 'I know he's too young but I'll let him go on condition that he paddles his own canoe.'

"So it was arranged that I should enter the law office of a friend in the East. Father drove with me over to the little station.

" 'Tom,' he said after I had purchased my ticket, 'you're goin' away from home now. I know that you don't realize the big things to be done on the farm and it'll take just as much brains to do them as it will to do things in law. But if you like your work, stick to it. If you don't—well, just remember that Mother and me will be glad to have you back on the old place.'

" 'Dad,' I said, trying hard to swallow the lump in my throat, 'I'm going to make good and I won't be home 'till I do.'

" 'All right, son,' he replied, 'all right.'

"The train arrived and I climbed aboard with the carpet hand-satchel in which were my worldly possessions. I opened the window as the train began to move after its momentary hesitation.

" 'Good-bye, Dad,' I cried with a tremulous voice.

" 'Good-bye,' and as he kept pace with the train for a moment he added, 'Don't forget, my boy, that a fool never changes his mind.'

A pucker appeared on the old man's brow and he hesitated. Outside the storm moaned and whistled until the little station trembled with every blast and the air coming from beneath the door made the yellow flame of the light sputter uncertainly. Unconsciously he crossed the floor and put more coal in the stove. Then returning he resumed his story.

"For over three years I studied law in the city. I need not tell you of the details of my work; only is it necessary

for me to say that the law was not what I had expected. In my letters to the folks I did not tell them of my disappointment for I was too foolishly proud, and, moreover, I still felt that the law offered the only means by which I could realize my ambitions. As time went on I became more dissatisfied yet I was ashamed to go home because of the boast I had made to Dad. With the crumbling of my air-castles came the insatiable longing for home. I fought with homesickness for days and shortly before Thanksgiving I came to a decision. That evening as my roommate and I sat in our little den I said, 'Dave, tomorrow I leave for home.'

" 'What,' he cried, looking up from his writing.

" 'Yes,' says I, 'I've been a fool all along. I'm going to give up the law—I've tried to like it but I can't. To me, lawyers don't produce anything; they just follow musty precedents that have been handed down from the dark ages. Taken generally, lawyers are only bar nacles on society—they live only when humanity quarrels. Some lawyers are necessary to keep humanity from quarreling but there are thousands of poor or fair lawyers, Dave, who ought to be suppressed and put to something useful. And I don't like the city—the great outdoors has called to me every day of the three years I've been here. In the country a man can see the work he accomplishes and each year he can avoid the mistakes he made the preceding one. But the average city man is only a cog in a great machine that ruthlessly crushes his sympathetic understanding of his fellow man; and when the average city man dies he has lived a lifetime without really seeing daylight. I can't stand it any longer! Tomorrow I start home for good!

"Two days later found me nearing

the little station at home. Eagerly I pressed my cheeks against the car window in search of familiar objects. Yes, over there behind a clump of trees was Henderson's pond; what wonderful games of "darkie" we had played there on the ice. And as the creek came to view I saw Bully Bend, the old swimming hole; what a flood of pleasant memories came trooping at its sight. And there was the old saw mill where we had played when youngsters—how pleasant it was to dig into the cool depths of the saw dust with our weary, barefoot toes. I can never tell you the happiness that was mine as I clambered down the car steps when the station was reached! I didn't tarry long enough even to greet old friends, for only two miles to the east over the gently rolling hills lay the little farm where I could find Dad and Mother.

"Down the old familiar road-way lined with mammoth willow trees and across the little wooded bridge I trudged. I could hardly wait until the crest of the next hill was reached for from there I could see the farm. With a madly thumping heart I fairly raced up the ascent and I shall never forget the joy that bubbled from my soul as I looked down into that sacred valley—I was almost home! Over along the little run in the pasture were Dad's favorite Herefords, peacefully nibbling the few remaining tufts of green grass; their white faces and sleek coats had never appealed to me as they did that evening. Near the piece of woodland I saw the sheep slowly wending their way toward the fold—what a sharp contrast their fleeces made against the darkening shadow of the woods: I left the road and started across the fields just as the sun sank below the horizon and the little valley lay bathed in the soft afterglow that precedes the dark-

ness of a November night. How sweet the wild color of the freshly turned furrows come to my eager nostrils! I longed to guide the plow with my own hands.

"It was dusk as I walked up the graveled driveway, lined on either side by whitewashed stones, that led to the house. Cautiously I approached the dwelling. In the kitchen, from the light cast by the dim lamp, I saw Mother bending over the old cooking stove. Gently I pushed the door but as it swung open the hinge creaked and she turned. Instantly her sweet face flushed with glad surprise and joy as she reached out her arms and cried, 'Tommy!' Quickly I crossed the threshold and took her frail form in my arms.

"'Mother, Oh!—Mother!' was all that I could murmur. Thank God! I had come home!"

The wind as if it understood, had ceased its fury and whispered gently around the corners of the station. The tenseness of the old man's form relaxed and he smiled like a boy as he resumed his story.

"'For some minutes,' he added quietly, 'we prattled and laughed like two children.

"'And how is Dad?' I asked.

"'He's fairly well,' she smilingly replied. 'He's finishing the milking now. Won't he be surprised tho! I believe he's coming now. Hurry, hide there in the sitting room so he can't see you.'

"'As he entered the kitchen, Mother said, 'We're going to have company for supper tonight, Joe.'

"'I'd better slick up a bit then. Who is it?' he asked in a half-interested voice.

"'It's me, Dad!' I cried coming thru the doorway.

"'Tom—Tom!' he exclaimed turning toward me, 'I'm mighty glad to see you,

son.' Then placing his left hand on my shoulder and putting his right hand in mine and looking me searchingly in the eyes, he inquired, 'And what did the law teach you, my boy?'

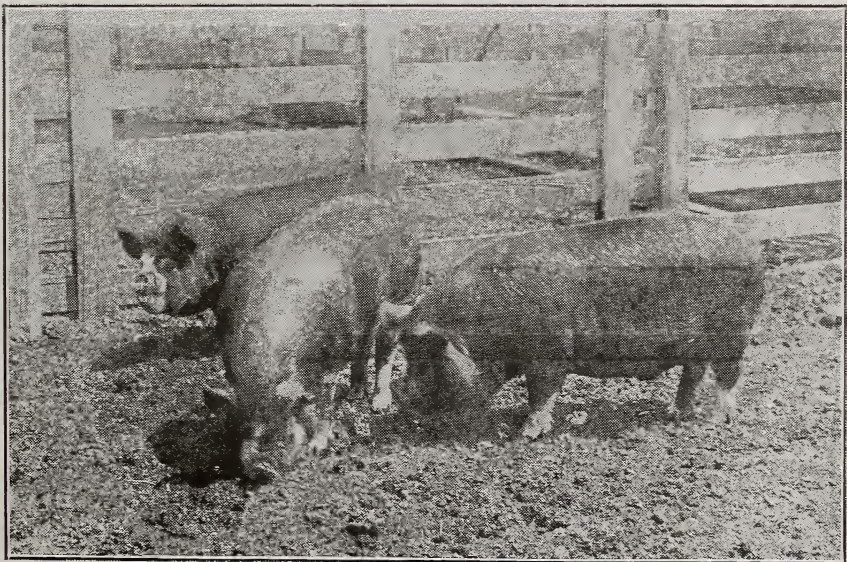
"'Dad,' I replied, 'it taught—it made me realize that there is nothing that offers a young fellow such a real chance to do things as farming does—and Dad—my Thanksgiving home-coming is a home-coming for keeps.'

"'Tom,' he said, with a merry twinkle in his eye, 'Mother and me always had a feelin' that some day you'd change your mind and be a wise man!'

"Late that night I climbed the stairs to my room. How good it was to be back again! And my room—Mother had kept it just the same as when I left it. There was my old shinny stick and skates hanging on a nail by the closet. Over on the little book shelf I saw the yarn ball while the rock-battered bat stood in the corner. On top of an old worn volume of 'Pilgrim's Progress' lay my favorite 'duck-on-davy' stone.

From my window, in the mellow moonlight I could see the orchard, the corn shocks in the field beyond, beyond that the pasture, while the shadowy blur of trees topped the crest beyond. Nothing had changed! And as I climbed into my bed and sank into the downy depths of the old feather tick a few tears found their way down my cheeks. They were tears of thanksgiving for a grown-up boy was happy that he had found himself—and had come home."

Thus ended his tale. A number of years have passed since that time, but whenever the leaves fall and old Mother Earth puts on her clothes of brown, I always think of that old man's tale of his Thanksgiving home-coming. I am carried back to that raw, blustery November night in the little railway station in Indiana. I can see the outstretched arms and the tense form of the aged man whom I knew only as "Tommy," as he cried in a faltering, pathetically-joyful voice, "Thank God! I had come home!"



Home Economics Department

BEAUTY IN THE HOME

MARION L. TUCKER, Ohio State University

DESIRE for beauty is an inborn trait of man's higher nature. It corresponds with his appetite for food, drink and rest in the realm of physical existence, and is just as important a part of his nature. The savage attempted to make his body more beautiful by the use of paints and stains. He added barbaric ornaments to his nose and ears to make himself more attractive in the eyes of the opposite sex. When he first put on clothing it was for the purpose of decoration rather than for protection and modesty. He was not satisfied with a plain woven fabric, but added colors and designs.

In the shelters built by primitive people are found many attempts at decoration and an undoubted desire to satisfy by means of these decorations some unconscious longing. Man of today has just the same desire, perhaps unconscious, for beauty in his surroundings, but his attempts to obtain this beauty result frequently in dismal failures. Many atrocities committed in the name of interior decoration are sincere attempts to create the natural stimulus which the aesthetic sense of man demands. Ignorance and an over zealous desire for beauty are the probable causes of many inartistic effects found in the homes of today.

Why not let people surround themselves with imitations of the real, if these imitations satisfy the desire for beauty? Experiments have been performed to show the effect of environment and it has been proved that we are influenced strongly by our sur-

roundings. What is seen around us has its natural effect upon our thoughts, and our thoughts govern our actions. As most people spend a portion of their time in the home environment, it follows that the atmosphere of the home has its influences upon the actions of members of the household, and a home which is truly beautiful in its decoration and surroundings is more conducive to better living than one which is full of shams, pretenses and ugliness.

For most people beauty in house decoration, means the spending of a large amount of money. Money is by no means the most necessary requisite. A small sum, supplemented by knowledge of essential principles underlying all decoration, can achieve wonderful results. Knowledge is the important factor, for without it little headway can be made. It is being realized more and more that success in making a home the place of beauty can come only through careful study and planning.

The ideal method is to start with a new house, or rather to start **before** the house is built. While the plans for the house are being drawn and discussed, the woodwork, the walls, the furniture and the general color scheme should be planned and in imagination fitted into its place and the result pictured. This however, is ideal and not usually possible. Instead the home is usually made in a house already decorated and furnished and which fails to satisfy the instinctive yearning for beauty which all possess. Such a home may present many problems, but the task of solving

them should not be slighted when the importance of the home atmosphere is considered.

There are suggestions which may be applied to all problems in house decoration. First, the house should be studied as a whole and not a room at a time. Perhaps you feel that you can have only one room "done over" altho they all need it. Don't limit your plans to one room, but decide just how you would have all the walls finished to carry out your longed for color scheme, just what furniture you feel you must discard and what new pieces you would like, what window hangings would be best for each room. Plan it all out, and make the most out of all usable materials you have. Get a mental picture of it. It will take many evenings of planning, consulting, advising and changing of plans once made, but it will result in unity. Each room has been planned in relation to the other rooms with which it connects; each bit of furnishing and decoration in any room has been selected with a thought of the other furnishings in the room. The whole scheme holds together and forms a harmonious whole. It may be that only one room can be finished at present. Do your best to bring this one room to the standard set, and as time and money allow, make the other changes planned. Many years may be needed before the plan is fulfilled, but if that plan provided for an artistic and beautiful home, there is no danger of its growing out of date or old-fashioned, for it will always be beautiful.

What are the characteristics of an artistic and beautiful home? First, an object of furnishing cannot be beautiful unless it serves its purpose and fulfills the function for which it was intended. Use and beauty are closely allied. The walls of a room are in-

tended to serve as a background for people, furniture and pictures. If the walls are covered with a gaudy paper of brilliant flowers which attracts attention and takes its place in the foreground, they cannot be called beautiful, no matter what the quality of the paper may be. A doorway serves as a passageway and when a portiere of exquisite material interferes with its function as a doorway we can not call that beautiful decoration.

Another attribute of beauty is simplicity. The terms "good lines" and "poor lines" are used over and over. Simplicity in house decoration implies good lines. It means the absence of all meaningless curves, twists and turns, and a simple conformity with the structural lines of the house. The window curtains will hang straight with the outline of the window; the furniture will not be tortured and twisted into strange shapes and covered with machine made carvings; the pictures will not be framed in broad gilt frames elaborately carved. Simplicity also implies good taste. It prevents a conglomerate mixture of various things of little value and furnishes things of real worth instead.

Simplicity may be carried over into the ideas relating to pattern. It is possible to furnish rooms with rugs, wall paper, window hangings, and table covers, all decorated with patterns of many and all kinds. It is also possible to do the opposite and eliminate design entirely. These are two extremes, the first producing confusion with its multitude of figures and designs, the second producing monotony by its absence of any figure. There is a medium, where the monotony may be relieved by some pattern being introduced in some of the furnishings. The pattern should not be foreign to the article it decorates,

but should seem to belong to it. An example of this may be found in a rug decorated with a plain border, two or three bands and a few simple lines. Such designs conform to the shape of the rug and form a part of the whole. Roses, reproduced in their natural form and color, can not be considered as part of and belonging to a floor covering.

Pattern and figure naturally turn the mind to color which has an important part in bringing beauty into the home. There is no item of home furnishing which can so change the effect of a room. Dark red paper will cause the room to appear dark and smaller than it is. The same room becomes much lighter and apparently much larger when papered in a cool gray blue. Of the two color schemes, the first will tend toward restlessness and excitement, the second to quiet and rest. A room which makes use of the soft browns of the fallen leaves in its woodwork and walls, with a touch somewhere of the yellow orange of the more brilliant autumn foliage, and with the dark green of nature in the rugs and draperies, will prove a beautiful and also a restful spot in which to live. Color has the power to bring peace or irritation, happiness or gloom to the mind, and is a factor in

bringing the atmosphere of beauty.

Many people think that when the house furnishings have been selected that their troubles are over. Yet they may spoil the effect by poor arrangement. Many a room has a confused unattractive appearance, yet all it needs is rearrangement and regrouping. First, be sure that the rugs lie on the floor parallel to the structural lines of the room. Straighten a rug or two and see the change in general effect. Let the large pieces of furniture stand parallel to the walls. Group them according to use, comfort and convenience. For instance, have the magazine rack and light near the easy chair. Have a comfortable seat before the fire and do not place furniture where it will obstruct natural passageways.

If natural desire for beauty in the homes is allowed full sway and yet controlled by means of careful planning by the restraining influence of simplicity and good taste, and if we freely make use of the questions—Is it of use? Is the design suitable and pleasing? Will the colors satisfy and delight us? Is the arrangement the best possible? The result will be homes of refinement, beauty and comfort which will tend to produce the best home atmosphere.

Emily Neighbor, '16, is dietitian at the Franklin County Tuberculosis Hospital at Columbus.

Ruby Wightman, '16, is instructor of domestic art in South High School, Cleveland, Ohio.

Isabel Hutt, '16, is instructor of domestic science in the high school at Vermillion, Ohio.

Mary Hershberger, '16, is an assistant in the department of home economics at the Ohio State University.

Margaret Lawrence, '16, is head of the department of home economics at Muskingum College, New Concord, O.

Petrea Gableman, '15, is teaching home economics in the high school at Pataskala, Ohio.

Nellie Hennel, '16, has charge of the home economics department in the high school at Williamson, West Virginia.

Doris Neer, '16, is teaching in the high school at Logan, Ohio.

Horticultural Department

GROWING PIMENTO PEPPERS

L. M. MONTGOMERY, Ohio State University

BECAUSE it is one of the most intensive forms of the animal industry and requires in many instances the same equipment dairying seems to be most suitable of all livestock interests to link up with some horticultural enterprise. Many dairymen are supplied with steam boilers and other equipment which are necessary for carrying on some phase of horticulture.

Pimento cheese is an established and increasingly important dairy by-product, a portion of the ingredients being a horticultural product and for which the dairymen at the present time are largely dependent upon for use in the commercial canning trade. It would be profitable for the dairyman to grow and pack his own supply of peppers for the manufacture of the pimento cheese, the cost of the pimento being a considerable item of expense. The culture of the pimento pepper is not essentially different from the ordinary garden types and may be successfully undertaken in this climate, tho they are not so productive as in those sections having longer, more uniform growing seasons. The essential feature being that the plants be started early, this requiring the use of a greenhouse or hotbed. The plants must be good size that they may be safely transplanted to the open ground in order to mature a crop.

Seed for the propagation of the plants may be obtained from some Southern or Pacific Coast seedsman. A local seed supply if available will probably be better adapted to local conditions. The seed will need to be sown in February in order that plants of the

size desired may be gotten. Germination takes place slowly, if the seed bed is not well heated. High temperature and sunshine are essential that the seed may germinate promptly and for the plants to grow quickly.

It will not be safe to transplant until late in May in central Ohio and not until the soil is well warmed. The culture during the summer is the same as for tomatoes and the common garden peppers.

The pimento pepper is a bluntly conic type with thick flesh, a quality which makes it especially adapted for use in pimento cheese manufacture. It is an excellent slicing pepper in the green condition and is popular in its ripened condition for salads and relishes. The supply for domestic, as well as commercial use is largely the canned product.

The canning of the ripened peppers is not a difficult matter and may readily be accomplished by simple methods. The steps in canning the harvested mature product are scalding to loosen the skin, peeling, packing in the containers, capping the cans, exhausting the air, tipping, testing for leaks, and processing or cooking. If it is desired to save the seed it is necessary to cut the peppers in halves longitudinally and remove the seed with the supporting matrix. Otherwise the removal of the seed may be deferred until after the scalding.

To loosen the skins, the peppers are subjected to a bath in a boiling hot lye solution for about six minutes. The solution is made up of 2 ounces of lye to

the gallon of water and should be kept constantly hot to be effective. In the absence of a lye solution, the peppers may be scalded in a steam or hot water bath, but the results will not be as satisfactory.

After scalding wash in cold running water to remove the lye and cool the material for handling. The skins are more difficult of removal than in the case of tomatoes and is the most tedious part of the process. The reduction in bulk is such that after peeling and removing the seed the fleshy portion will appear to be quite meager.

After peeling and seeding the fleshy portion is ready for packing into the containers which are usually tin. The size of the tin to use depends upon the amount of the pepper required at any one time. While the peppers as put up by the trade are packed in No. 1 cans there is no reason why larger cans may not be used if larger quantities of the pulp are needed in making the necessary supply of the finished cheese from time to time. Probably sizes larger than No. 3's should not be used.

In the commercial packing of the peppers more or less secrecy prevails and the packers are reticent about disclosing their methods. For all practical purposes the use of oil in packing the product is not necessary and methods similar to those in canning tomatoes are applicable. This will consist in placing the peeled fleshy portions in the

containers so as to fill them within one-half inch of the top when well packed down. Cover the solid contents with a weak salt brine (3 oz. of salt to the gallon of water), but do not fill the can nearer than one-quarter inch of the top.

The cans are then sealed by fixing the caps on with solder—a process called capping. In the canning trade the cans are scalded by machinery without the use of solder. Hand methods involve the use of heated capping steels and tipping coppers.

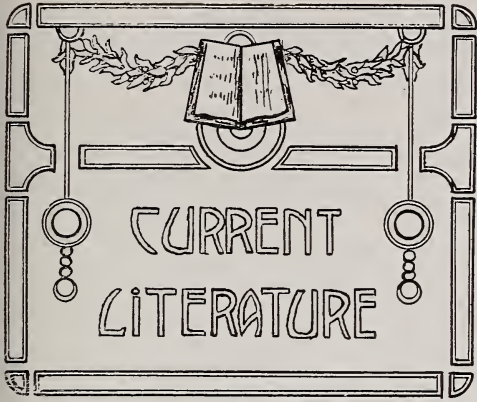
After capping, the cans must be heated in steam or hot water to drive out the air and expand the contents. If hot water is used the cans must not be submerged as the small hole still unclosed in the cap would admit water to the interior. The time for exhausting will be about 5 minutes. (In commercial work the exhausting takes place before capping.) The small hole in the center of the lid is then tipped with a small drop of solder neatly spread by means of the tipper copper or common soldering iron. After the cans are tipped they are plunged into boiling hot water to detect any leaks due to faulty sealing.

Return the cans to the retort and process for about fifty minutes at boiling temperatures or for about twenty-five minutes at 10 pounds steam pressure. Remove from the retort and cool with running water.

Demonstrations to show proper planning and planting about a rural school are being carried on at the new Dixon Township Centralized School in Preble County by R. B. Cruickshank, extension specialist in horticulture who is working in Preble County in cooperation with the county superintendent.

In laying out the grounds Mr.

Cruickshank has emphasized the importance of proper planting of the ground and the use of good native stock adapted to the location in preference to an elaborate plan and the importing of nursery novelties which would necessitate a much greater expense with little if any added attractiveness. Altho the campus is 5 acres in size the entire cost has only been \$100.



“The Principles of Feeding Farm Animals” by Sleeter Bull is a treatise in which has been presented the scientific facts underlying the art of feeding farm animals in a way that the book will not only be suitable for use as a college text but will also be valuable to the farmer who has not had a technical education in agriculture. In the first six chapters the author has presented a scientific aspect of the subject as the chemical composition of feeding stuffs and their digestibility. So that the inexperienced feeder can formulate fairly satisfactory rations, definite rules regarding the feeding of different classes of livestock which were taken in connection with the feeding standards and the discussion of the nutritive value of different feeds are given. 497 pages, \$1.75. The Macmillan Company, New York City.

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“Rural Arithmetic” by Augustus O. Thomas, is a text in which are given problems on different phases of farming which may be used either in the grammar or high school in connection with the teaching of agriculture. Included in the book are problems in land measurement, feeding of farm animals, labor and machinery, farm records and accounts, building problems,

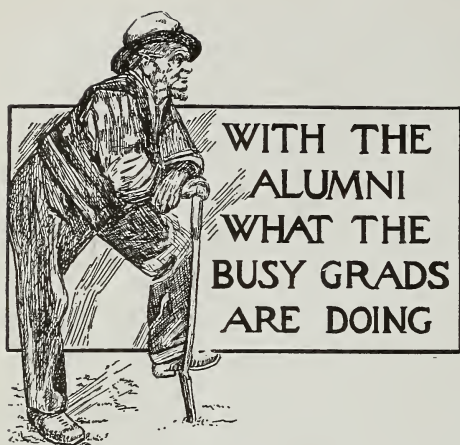
home economics and mensuration. A complete set of answers is given with the book. 288 pages, American Book Company, Cincinnati.

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“The Farmer of To-Morrow,” by Frederick Irving Anderson is a book in which the author has brought together a popular consideration of the fundamental factors of farming the soil and the resources of the soil, soil fertility, and shows how the inter-relation of the two must determine the type of farming of any community. The author also points out the fact that thru increasing the efficiency of the land and farming methods that the nation still possesses resources enough to feed double the population that exists today. 308 pages, 50 cents. The Macmillan Company, New York.

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“Field Management and Crop Rotation” by Edward C. Parker, is a popular treatise for farmers and a reference book for agricultural students, editors and publicists. It treats of the more important problems of farming of modern times—the maintenance of soil productivity and the profitable use of capital and labor in agriculture. Much of the subject matter of the book traces back to investigational work done by the agricultural experiment stations. Included in the book is a historical review of agriculture with special reference to soil management and crop rotation; a discussion of the advantages of crop rotation with rotations given for different sections of the country; and the use of fertilizers in the rotation. Several chapters are devoted to the experimental evidence that has been gathered on the different factors entering into the field management and crop rotation. 507 pages, \$1.50. Webb Publishing Company, St. Paul.



Earl T. Jones, '12, is professor in the Massachusetts State Agricultural College at Amherst. At present he is acting head of the department of agronomy. Mr. Jones was formerly connected with the extension department in the University of Maine.

Robert E. Crouch, '16, is principal and teacher of agriculture in the high school at Hebron, Ohio.

Edward Rinehart, '10, is in the department of dairying at the Idaho Agricultural Experiment Station. He formerly did extension work at Ohio State University.

Carl T. Colt, '16, is color sergeant in the Ohio State Militia which is now stationed at the Mexican border.

Harry L. Curtiss, '15, is taking his Master's degree in farm crops at the University of Illinois.

William O. Frohring, '14, and Gertrude L. Lewis, both of Cleveland, were married September 25. They will be at home in Cleveland after November 1 where Frohring is chief chemist for the Telling-Belle Vernon Milk Company.

Orville W. Jamison is professor of dairying at the Massachusetts State College of Agriculture.

Walter A. Alexander, '16, is instructor of agriculture in the Presbyterian Academy at Hudson, Ohio.

I. W. Beerbower, '15, is managing a farm at Hicksville, Ohio.

Herbert E. Otting, '13, and Rosalind Knise of Susquehanna, Pennsylvania, were married at their home in Columbus on October 3. Mr. Otting is chief chemist and superintendent in charge of all laboratories of the John Wildi Condensery Company with headquarters at Columbus. He recently made a trip to England in the interest of the Company.

Robert W. Marekworth, '16, is working for a Master's degree in forestry at Yale University.

Arthur J. Copeland, '15, is head of the department of agriculture in the Marion Normal Institute, Marion, Ind.

Paul T. McClure, '16, is teaching science and agriculture in the high school at Wooster, Ohio. He is also coach of athletics.

Harry W. Drain, '13, is in the dairy department of the Massachusetts State Agricultural College.

J. R. Stear, '16, is assistant in zoology at the University of Illinois. He is also working for his Master's degree in entomology.

Norwood W. Glines, '16, and Bertha E. Stol were married on September 27 at her home in West Columbus. They will reside on Mr. Gline's fruit farm near Marietta.

Frank B. Cross, '16, goes to the University of Oklahoma as instructor in horticulture. He is also working for a Master's degree in pomology.

Louis W. Works, '13, is employed by the Home Dairy Company as Superintendent of their plant at Springfield, O.

Aaron F. Head, '16, is an instructor in the department of soils at Michigan State College of Agriculture at Lansing. Mr. Head specialized in soils and soil chemistry while at Ohio State and did extensive soil survey work thruout the state.

Glen A. Boger, '15, is superintendent of the John Wildi Condensing Company's plant at Delavan, Wisconsin. He was formerly chemist for the same company at Marysville, Ohio.

Dexter N. Lutz, ex-'16, is in the hospital detachment of the second Ohio Infantry at El Paso, Texas. Mr. Lutz was head of the department of botany at Fiske University, Nashville, Tennessee. He would have taken his degree at the end of the summer term had he not been called to the border.

Professor A. D. Selby, '93, of the Ohio Agricultural Experiment Station, reports extensive results with the blossom-end rot in a trip recently made over the state.

L. L. Rummell, '15, and Miss Alta Pearl Eason were married on October 20 at the home of the bride's parents at Louisville, Kentucky. They will be at home after November 10 at Wooster where Rummell is editor of publications at the Ohio Agricultural Experiment Station. He was editor of the Agricultural Student during his senior year.

S. C. Plank is managing a farm at West Liberty, Ohio.

Chester A. Baird, '16, is doing soil survey work near Zanesville, Muskingum County, Ohio. Mr. Baird will soon go to Texas where he will be similarly employed during the winter months.

James Marple, '15, is teaching manual training in the Columbus schools. He took special work along that line in the Stout Institute of Manual Training at Menominee, Wisconsin.

Max Phillips, '16, is employed by the Pure Milk Company of Akron, Ohio.

W. I. McCann, '14, is working for his Master's degree in pomology at Cornell University.

William Brownfield, '12 was recently appointed county agent for Washington County, Ohio.

Vernon E. Haber, '15, is instructor in zoology at Cornell University. Mr. Haber took his Master's degree in entomology at Ohio State in 1916 and was also assistant in the department of zoology for three years. He will work for his Doctor's degree at Cornell.

Virgil Overholt, '15, is engineering specialist in the extension department of Ohio State University.

Charles W. Graham, ex-'18, is teaching in the new centralized school at Kings Creek, Ohio.

Harvey Hoewischer, '15, is with the firm of Hoewischer and Sons, breeders of Percherons and Belgians, Sidney, O.

Thomas D. Phillips, '10, is assistant professor of rural economics and also manager of the University Farm at Ohio State. He is master of University Grange.

Ross Greenawalt, '16, is superintendent of a live stock farm near Harmony, Ohio.

Clarence Eisinger, '16, is with the Furnace Ice Cream Company. He is traveling in West Virginia.

R. R. Pearson, '16, is professor of rural economics at Bethel College, Bethel, West Virginia.

Foster Caven, ex-'17, was married Sept. 3, 1916, to Miss Victorene Redinbo, Sidney, Ohio. They are at home at Kirkwood, Ohio, where he is running an elevator.

Lee Earnhart, '14, is with the John Wildi Milk Condensing Company near Pittsburgh, Pa.

Carl Eickhorn, '15, is making a specialty of poultry and fruit on a farm near Barnesville, Ohio.

Stanley Leonard, '16, is a landscape gardener for Mr. A. D. Taylor, non-resident professor of horticulture at Ohio State, who is located at Cleveland. He has recently been working at Lake Chautauqua, New York.

Howard Fisher, '15, is engaged in dairy farming near Sidney, Ohio.

Robert M. Salter, '13, is instructor in the soils department of the West Virginia State University at Morgantown, W. Va.

Noel Myers, '16, is teaching science and coaching athletics in a high school at Brooklyn, Iowa.

R. C. Goldbach, '15, is with the John Wildi Milk Condensing Company, at Lewisburg, Pa.

John T. McClure, '16, is teaching agriculture and coaching athletics in the high school at Fairmont, W. Va.

Joseph Hale, '14, is field man and dairy chemist for the Canton Pure Milk Company at Akron, Ohio.

David P. Evans, '16, is with the John Wildi Milk Condensing Company at Lewisburg, Pa.

M. V. Van, ex-'17, is working for the Sanitary Milk Company at Salem, Ohio.

Russell Rinehart, '13, is operating a dairy farm near Lynchburg, Va.

Ray Donley, special-'16, is now with the Budd Dairy Company located at Columbus, Ohio.

Frank Bowser, '15, is working in a milk condensery at Wellsboro, Pa.

Clinton B. Clevenger, '12, M. A. '13, is soil chemist in the agronomy department of the University of Illinois.

Walter Scheid, '15, is farming at Monroeville, Ohio.

Arthur Walcutt, '14, is dairyman and assistant herdsman at the state farm at Athens, Ohio.

Clayton Windau, '14, is a dairy farmer near Sandusky, Ohio. He is also doing testing for the advanced registry.

J. C. Hedge, '12, is county agent for Summit County, Ohio.

Cyrus Harpster, '14, is general manager of the Moore and Ross Milk Company, Columbus.

R. L. Marsh, '14, is farming near Kent, Ohio.

Francis L. Morrison, '16, is back in school working for his Master's degree in farm management.

William G. Spanton, '16, is teaching agriculture in the high school at Plain City, Ohio.

Lawrence Adams, '15, is principal of a high school at Middlepoint, Ohio.

James Mensching, '14, M. A. '15, is in charge of nutrition work at State College, Pa.

F. W. Dean, '16, is assistant in the department of botany at Ohio State University.

Robert A. Hammond, '16, is farming near St. Clairsville, Ohio.

Dillon S. Myer, '14, is county agriculturist for Venderburg County, Ind.

Walter Holdson, '14, is superintendent of Shadybrook Farm near Mentor, Ohio.

Donald D. Hughes, '16, is farm management demonstrator for the extension department at Ohio State University.

Lott E. Bechtel, '16, and Miss Bertha E. Vickers, of Marion, Ohio, were married on July 30. They are at home near Pemberville, Ohio, where Mr. Bechtel is operating a livestock farm.

Chas. A. Carran, '16, is in the poultry business at Marion, Ohio.

Olen H. Smith, '15, is agronomist at the Ohio Experiment Station, Wooster, Ohio.

Fred H. Herzer, '14, is an instructor in dairying at the college of Agriculture, University of Arkansas.

Herbert A. Wise, '13, is located at Greenwood, Ind., and has charge of the butter and special products department of the Polk Sanitary Milk Company, of Indianapolis.

George Livingston, '09, is in the Office of Markets, U. S. Dept. of Agriculture at Washington, D. C.

NOVEMBER NEWS NOTES

New Club Work Assistant.

Treva Kauffman, extension instructor in home economics, has recently been appointed assistant in Boys' and Girls' Club Work. In the past Miss Kauffman has been devoting a good deal of time to introducing hot lunches in rural schools. She will continue to do this work and be in charge of the Home Making Clubs. Hulda Horst, also an instructor in home economics, will assist Miss Kauffman in the hot lunch work.

Apple Show in December.

With thirteen classes of apples, exhibits of vegetables, and displays by various organizations on the campus the sixth annual Apple Show will be held in the Horticulture and Forestry Building, December 14 to 16. Attractions at the show will consist of displays of diseases and insects of fruit trees, displays by several floral companies of Columbus, and exhibits of canned goods, flowers and pie. There will also be a pie baking contest for the home economics students. The Ohio Agricultural Experiment Station will have an exhibit of 25 varieties of apples which are not commonly known.

In connection with the show will be held the Inter State Judging contest which will be participated in by teams from seven universities. Included in the teams are Maryland, Delaware, West Virginia, Pennsylvania, Kentucky, New Jersey and Ohio.

Twenty-five students are trying out for the Ohio State team under the direction of Williard H. Mosier, coach. Twenty-five varieties of apples have been brought from the Ohio Agricultural Experiment Station and are being used for the work in judging. The

team is working to retain the cup won by last year's team as the cup will become the permanent property of the school which is first to win it three times.

The committee for the Apple Show consists of Clarence E. Dutton, senior, chairman; Ralph R. Rothacker, junior; Howard J. Ruetenik, junior; Joseph E. Fouser, senior; and Robert Spear, sophomore.

New Agent Appointed.

W. W. Brownfield, county agricultural agent of Barbour County, West Virginia, has been appointed county agricultural agent of Washington County, Ohio, effective December 1, to fill the position left vacant by the resignation of E. J. Riggs. Mr. Riggs resigned in order that he might return to his farm in Gallia County.

Mr. Brownfield was raised on a farm near Uniontown, Pa. Following his graduation from the Ohio State University College of Agriculture in 1912 he returned to the home farm. He remained there until August, 1915, when he was appointed county agricultural agent of Barbour County. He started a number of demonstrations and organized a number of local farmers' clubs and boys' and girls' clubs.

County Agents Increasing.

That county agent work is increasing in favor in Ohio is shown by the recent appointments of J. C. Hedge, '10, Ohio State University as county agent for Summit County, Roger D. Long, a graduate of the University of Maine, for Cuyahoga County.

Hedge, a native of Noble County, Ohio, has been superintendent of the dairy farm at the Massillon State Hos-

pital for the past two years. Prior to this time he was assistant in the department of dairying at Ohio State University. He began his new work October 15 with headquarters at Akron, Ohio.

Long comes to Cuyahoga County with previous experience in county work in Rockington County, New Hampshire, for the last two years. He will begin work December 1 with offices at Cleveland.

Institute Workers Meet.

The annual farmers' institute normal and county agent conference was held at the Ohio Union, Ohio State University, October 24, 25 and 26. The day meetings were devoted to a round table discussion of different projects and questions that come up in institute work. Separate sessions were given to the study of problems in soils, animal husbandry, dairying, horticulture, and to home economics for the women workers of the farmers' institute staff.

The session in soils was led by Professor Firman E. Bear of the soils department, in animal husbandry by Professor Charles S. Plumb of the department of animal husbandry, in horticulture by Professor Wendell Paddock and in dairying by Professor Oscar Erf. C. R. Titlow, director of agricultural extension at the University of West Virginia in an address outlining the work of farmers' institutes, spoke of them as being the medium through which the farmer may derive benefit from the work done by our colleges and experiment stations.

Other speakers at these meetings were Lloyd R. Simmons of the U. S. Department of Agriculture, Professor Harry C. Ramsower of the department of agricultural engineering, Prof. Paul L. Vogt of the rural economics depart-

ment and G. N. Dagger, director of farm management demonstrations for the extension department. Dean Alfred Vivian, Clark S. Wheeler, director of the extension department and F. L. Allen, supervisor of farmers' institutes, acted as chairmen of the meetings.

A resolution was passed at the meeting to ask the state legislature to pass a law compelling all dogs not on their owners' premises to be muzzled unless accompanied by their owners. It was expressed at the meetings that dogs were rapidly driving sheep out of Ohio.

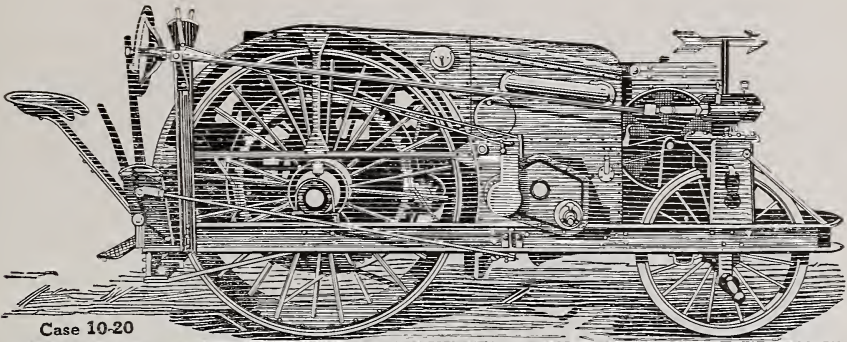
This is the second year that the institutes have been under the control of the University, having been previously run by the state for 38 years.

Hold Young International.

Preparatory to taking the University livestock to the International Livestock Exposition at Chicago, the Saddle and Sirloin Club in cooperation with the department of animal husbandry will stage the annual Young International in the judging pavilion on Friday night, November 24. The exhibit will consist of the University livestock which will be taken to the show in addition to the other livestock of the University, besides an exhibition of judging by the team which will represent Ohio State at the International.

The Saddle and Sirloin Club held two meetings in October. One was addressed by Charles E. McIntyre, superintendent of state farms, who talked on the "Advantages of More Capital in Better Livestock Production," and the other by John Begg, president of the State board of agriculture.

The following officers were elected for the semester: Herbert B. Marshall,



Case 10-20

What Agricultural Students Should Know About Tractors

Everyone who is studying the farm tractor situation wants to know something about the different companies, particularly the leaders.

More than 152 tractors are now on the market, new ones being announced continuously. But, says The Country Gentleman, "The good tractors can be counted on one hand. Emphatically, the light tractor *has* been made practical. But not *all* the light tractors on the market are practical. There is a special danger in the tractor made by a concern that lacks experience in either this or the farm-implement field."

So it is well in studying tractors to become familiar with the leader, and why it dominates.

When you come to reason it out, it is natural that a concern like the J. I. Case Threshing Machine Company, which is celebrating its seventy-fifth anniversary this year, should take first rank. For back of each Case Tractor lies tradition, history and valued reputation—worth millions.

We built our first tractor 24 years ago, and have since spent hundreds of thousands in perfecting it. We have completed all the experimental work before placing our tractors on the

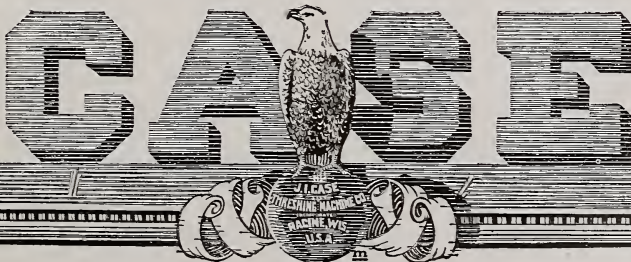
market. We could not afford to let the farmer do his own experimenting.

It is well to recognize at the outset that any tractor must be backed by the service afforded by the maker. For thinking farmers know that any tractor—barring none—might have a slight mishap during rush seasons, when even a day's delay is costly. Sending to a far-away factory would mean delay. But not so with any of the five Case tractors. There are 44 branch houses and 9000 dealers throughout the country, so help is always near, measured by minutes and hours instead of days.

Case has always stood for quality. Your grandfather and father have placed their confidence in Case—an unviolated trust. Case is a standard company, making standard products, nothing freaky nor experimental. It has an unmatched corps of tractor engineers and experts, backed by unlimited resources in factory and field laboratories.

In commemoration of our seventy-fifth anniversary, we have gone the limit this year in preparing the 1917 Case album. Everyone interested in power farming should have a copy. In this book is described completely the Case line of kerosene and gas tractors—in five sizes—9-18, 10-20, 12-25, 20-40 and 30-60. Write today for your copy. It is free.

J. I. Case Threshing Machine Co., Inc., 113 Erie St., Racine, Wis.
Founded 1842 (464)



senior president; Griff Eidson, senior vice-president; George L. Brown, senior secretary; and Delmer C. Jobe,

junior treasurer. Plans were also started for the annual horse show to be held at the University next spring.

NATIONAL DAIRY SHOW HELD AT SPRINGFIELD, MASS.

The National Dairy Show was held at Springfield, Massachusetts, from October 12 to 21. A total of 886 dairy cattle were exhibited, 204 of which were Guernseys, 163 Ayrshires, 157 Holsteins, 259 Jerseys and 103 Brown Swiss. The large Machinery Hall with over 70,000 square feet of floor space was unable to accommodate all the machinery that was placed on exhibit.

The students' judging contest participated in by various colleges in the United States was held on October 13. It was marked by a greater representation than any previous contest, there being 18 teams entered from all parts of the country. The Eastern States were better represented than they had ever been before.

Four \$400 scholarships were awarded as prizes besides seven cups and five gold medals. The cup donated by the De Laval Separator Company was given to the man making the highest score in the contest. The American Jersey Cattle Club scholarship was awarded to the man making the highest score on scoring Jerseys. To the sweepstakes team went the scholarship given by the Associated Manufacturers Company of Waterloo, Iowa. The Holstein scholarship was given to the man making the highest score on Holsteins.

In addition seven cups were given as prizes, by the American Guernsey Cattle Club, the American Jersey Cattle Club, the Ayrshire Breeders' Association, the Holstein-Friesian Association, Hoard's Dairyman, J. B. Ford Company of Wyandotte, Michigan, and the National Dairy Show Association. The breeders' cups were awarded to the

teams making the highest scores on the respective breeds. The Hoard's Dairyman cup went to the highest team on all breeds, the Ford cup to the second highest team in the contest and the National Dairy Show cup to the sweepstakes team.

The contest was conducted by Helmer Rabild and assistants from the dairy division of the bureau of animal industry, United States Department of Agriculture, Washington, D. C. The coaches from the different colleges passed on the rings and reasons. Eight classes of animals were judged, including a ring of cows and a ring of bulls from each of the four dairy breeds, Jerseys, Holsteins, Guernseys and Ayrshires.

The schools that were entered were the Universities of Massachusetts, Connecticut, Delaware, Iowa, Kansas, Nebraska, Maine, Maryland, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Dakota and Vermont.

The three highest teams in the contest were the University of Nebraska with 3632.25 points out of a total of 4800; Kansas State Agricultural College with 3534.5 points; and the Iowa State Agricultural College with 3530.9 points.

The winners of the scholarships were: Jersey, Charles Clough of the Massachusetts Agricultural College; Holstein, W. F. Roberts of the University of Nebraska; the Iowa Separator Company, the Nebraska team; and the De Laval scholarship, W. F. Roberts of the Nebraska team.

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Private Lessons by appointment any day or evening. Private tuition, \$1 per lesson; six lessons for \$5.

Premier Dancing Club every Wednesday and Saturday night.

Assembly Dance (open night), K. of C. Hall, State and Sixth Streets, every Saturday night.

Junior Assembly Dance (open night), Premier Academy, Keith Theatre Building, every Tuesday night.



The Euclid Academy of Dancing

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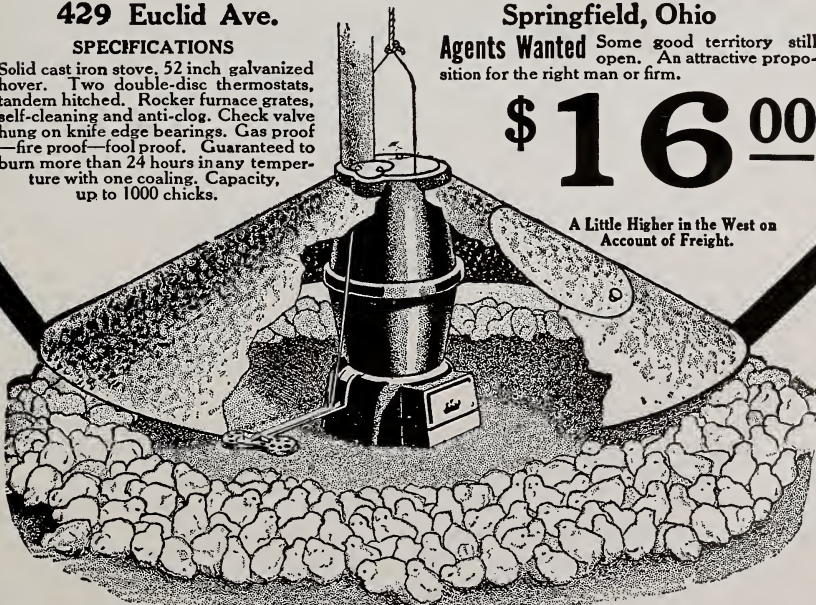
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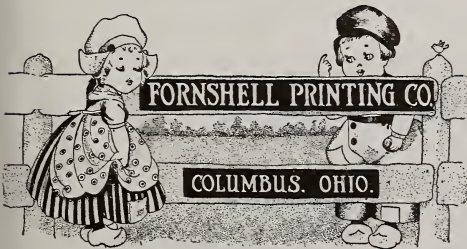
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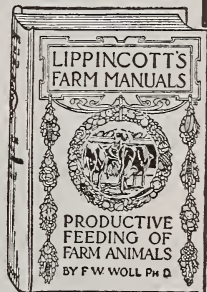
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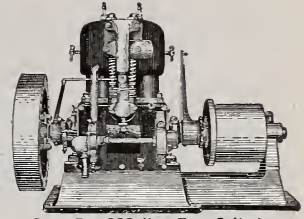
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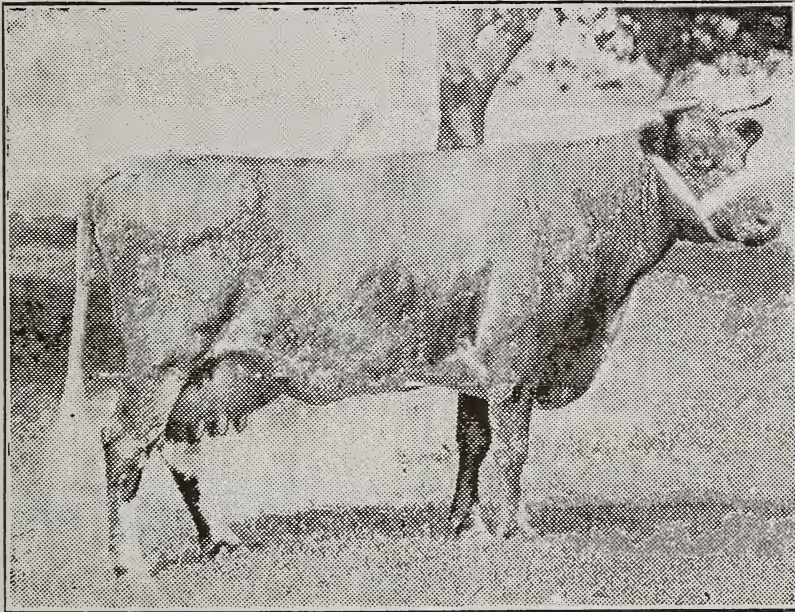
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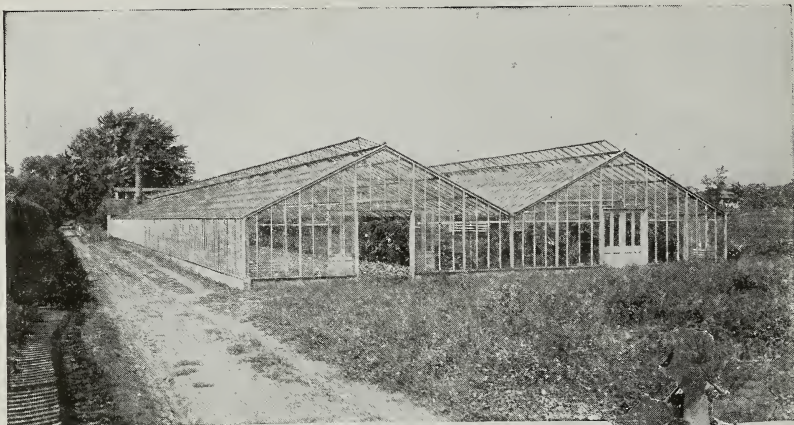
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| 1892 Madison, Wis.—Louis Brahe, Washington, Ia. | 1904 St. Louis, Mo.—J. C. Joslin, Winsted, Minn. World's Fair Grand Prize Butter. |
| 1893 Dubuque, Ia.—C. W. Smith, Colvin's Park, Ill. | 1906 Chicago, Ill.—A. Carlson, Rush City, Minn. |
| 1895 Rockford, Ill.—F. C. Oltrogge, Tripoli, Ia. | 1907 Chicago, Ill.—A. Lindblad, North Branch, Minn. |
| 1896 Cedar Rapids, Ia.—Thomas Milton, St. Paul, Minn. | 1908 St. Paul, Minn.—J. C. Past. Hector, Minn. |
| 1897 Owatonna, Minn.—H. N. Miller, Randall, Ia. | 1909 Milwaukee, Wis.—A. J. Anderson, Otisco, Minn. |
| 1898 Topeka, Kan.—Samuel Haugdahl, New Sweden, Minn. | 1910 Chicago, Ill.—Albert Camp, Owatonna, Minn. |
| 1899 Sioux Falls, S. D.—A. W. McCall, Creston, Ia. | 1911 Chicago, Ill.—A. J. Anderson, Otisco, Minn. |
| 1900 Lincoln, Neb.—H. T. Sondergaard, Litchfield, Minn. | 1912 Chicago, Ill.—A. L. Radke, Plato, Minn. |
| 1901 St. Paul, Minn.—E. O. Quenvold, Owatonna, Minn. | 1913 Chicago, Ill.—O. N. Peterson, Rapidan, Minn. |
| 1902 Milwaukee, Wis.—E. L. Duxbury, Green Bay, Wis. | 1914 Chicago, Ill.—Thomas Sadler, Oelwein, Ia. |
| 1904 St. Louis, Mo.—L. S. Taylor, Glenville, Minn. | 1915 Mason City, Ia.—Emil G. Oman, Delano, Minn. |

(There were no National Conventions in 1894, 1903 and 1905.)

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